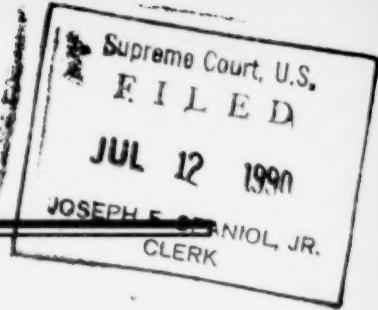


90-92

No. 90-



IN THE
Supreme Court of the United States
OCTOBER TERM, 1990

AMERICAN PETROLEUM INSTITUTE,
Petitioner,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY, *et al.*
Respondent.

**PETITION FOR A WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

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QUESTION PRESENTED

Whether *Chevron v. Natural Resources Defense Council*, 467 U.S. 837 (1984), permits a reviewing court, which has found no reason other than political pressure for an agency's decision to abandon its proposed rule in favor of a different final rule, to supply the court's own post-hoc rationale for the final rule and remand to the agency for its summary concurrence.

(i)

PARTIES

The parties to the proceeding below were the Hazardous Waste Treatment Council, the Chemical Manufacturers Association (CMA), the Natural Resources Defense Council, Chemical Waste Management, Inc., Chemetco, Inc., and the United States Environmental Protection Agency. The intervenors below were the American Petroleum Institute, the Edison Electric Institute and the Halogenated Solvents Industry Alliance. The petitioner here, American Petroleum Institute (API), is a non-profit trade association whose membership includes over 200 companies engaged in all aspects of the petroleum industry, including exploration, production, refining, transportation and marketing. API does not have any outstanding publicly held securities. Nor does API have any publicly owned parent, subsidiary, or affiliate.

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U.S. ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

**PETITION FOR A WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

Petitioner respectfully requests that a writ of certiorari issue to review the judgment and opinion of the United States Court of Appeals for the District of Columbia Circuit.

OPINION AND NOTICES BELOW

The opinion of the court of appeals is reported at 886 F.2d 355 (D.C. Cir. 1989) and is included in the Appendix at pp. 1a to 41a. The order of that court summarily affirming the agency's "Notice of Compliance" and entering judgment dismissing the petitions for review is not reported and is included in the Appendix at pp. 42a to 44a. The Final Rule challenged on review in the court of appeals has not been codified; it is published at 51

Fed. Reg. 40,572 (1986), and is reproduced in relevant part in the Appendix at pp. 45a to 48a. The Proposed Rule is published at 51 Fed. Reg. 1602 (1986), and is reproduced in relevant part in the Appendix at pp. 49a to 64a. The "Notice Of Compliance" is published at 55 Fed. Reg. 6640 (1990), and is included in the Appendix at pp. 65a to 77a.

JURISDICTION

The opinion of the court of appeals remanding to the agency but staying judgment and the issuance of its mandate was entered on September 15, 1989. The agency's Notice of Compliance with the court's remand was filed on February 12, 1990. The order of the court summarily accepting the Notice of Compliance and entering final judgment dismissing the petitions for review was filed on March 14, 1990. On June 4, 1990, the Chief Justice granted an extension of time within which to file a petition for a writ of certiorari to and including July 12, 1990. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

STATUTORY PROVISIONS INVOLVED

Title 42 U.S.C. § 6924(m) provides in relevant part:

- (1) [T]he Administrator shall, after notice and an opportunity for hearings and after consultation with appropriate Federal and State agencies, promulgate regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized.
- (2) If such hazardous waste has been treated to the level or by a method specified in regulations promulgated under this subsection, such waste or residue thereof shall not be subject to any prohibition promulgated under subsection (d), (e), (f), or (g) of this section and may be disposed of in a land dis-

posal facility which meets the requirements of this subchapter.

STATEMENT

1. In 1984, Congress amended the Resource Conservation and Recovery Act of 1978 ("RCRA"), Pub. L. No. 94-580, 90 Stat. 2795 (codified as amended at 42 U.S.C. §§ 6901-6992 (1982 & Supp. IV 1986)), to address, *inter alia*, the disposal on land of hazardous wastes. Hazardous and Solid Waste Amendments of 1984 ("HSWA"), Pub. L. No. 98-616, 98 Stat. 3221 (codified as amended at 42 U.S.C. §§ 6921-6939 (1984)). In the process, Congress amended section 3004 of RCRA to restrict or prohibit land disposal of such wastes *except* under circumstances defined by the statute or by Environmental Protection Agency ("EPA") regulations. In particular, Congress required EPA to "promulgate regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." RCRA § 3004(m); 42 U.S.C. § 6924(m). Under the statute, compliance with EPA's treatment standards would permit land disposal to continue.

2. On January 14, 1986, EPA issued a Proposed Rule setting forth a framework for establishing hazardous waste treatment standards that would permit land disposal under § 3004(m). See App. 49a (hereinafter "Proposed Rule"). The Proposed Rule combined two basic approaches to environmental regulation: risk-based standards and technology-based standards. Risk-based standards, which the agency labeled "screening levels," identify the maximum concentration of a particular pollutant that can be disposed on land without posing a significant threat to human health or the environment. *Id.* at 56a-59a. Technology-based standards identify the concentration of a particular pollutant that will result

from treatment with the Best Demonstrated Available Technology, or "BDAT." *Id.* at 52a-56a.

The agency proposed to rely chiefly on screening levels to set its treatment standards: treatment standards would be set at screening levels where these levels indicated that less treatment was needed to protect health and the environment than would be achieved by use of BDAT, as well as where far more effective treatment than could be achieved by BDAT would be needed. The agency would use BDAT levels in setting the treatment standard only where BDAT levels, although less effective than an ideal risk-based level, would achieve "substantial reductions in toxicity or mobility and [would] not pose greater risks than land disposal." *Id.* at 59a. In that situation, the agency would still use the screening level "as a goal that may be reached as new technologies emerge." *Id.*

EPA explained at length the advantages of using screening levels and the reasons why such an approach was consistent with the statute. In particular, explained EPA, the use of screening levels "will be used to avoid 'excessive' treatment." *Id.* at 56a.¹ Indeed, it was important to use screening levels because "[t]he agency does not believe that Congress intended that EPA promulgate standards requiring *treatment for treatment's sake* (i.e., requiring more treatment than necessary to protect human health and the environment)." *Id.* at 56a-57a (emphasis added). At the same time, the use of screening levels would enable EPA to identify circumstances in which *none* of the available technologies provided adequate protection to human health, and would

¹ EPA explained that excessive treatment would occur if the agency based its standards *solely* on BDAT because "available technologies may be capable of achieving greater reductions in toxicity . . . than are actually necessary to provide protection of human health and the environment in subsequent land disposal of hazardous wastes." App. 56a.

therefore serve to spur the development of "new and more efficient technologies." *Id.* at 57a. At the end of its lengthy discussion of the advantages of screening levels, EPA noted that it would also consider using two alternative approaches, each of which would use only BDAT to set treatment standards.

On November 7, 1986, after receiving numerous comments indicating widespread support for the use of screening levels, the agency issued its Final Rule. See App. 45a. The agency completely reversed itself and announced that it had abandoned its Proposed Rule in favor of a BDAT-only approach.² It did not explain the basis for its about-face, nor did it attempt to explain how technology-based standards requiring treatment for treatment's sake would be consistent with the statute. Instead, the agency simply stated that "the plain language of the statute does not preclude a technology-based approach." *Id.* at 47a. The agency did disclose, however, that "several commenters, *including eleven members of Congress*, argued strongly that this [screening levels] approach did not fulfill the intent of the Law." *Id.* (emphasis added). Although EPA rejected the contention that the statute required a BDAT-only approach, the agency concluded that adopting such an approach "best responds to the above-stated comments." *Id.*³

² EPA's Final Rule does permit parties to petition the agency for individual exemptions from the BDAT requirement. 51 Fed. Reg. 40,572, 40,578. When it published its Proposed Rule, however, the agency had emphasized that "the petition process" had the "major drawback" of restricting land disposal during the petition review period and burdening the agency with the need to consider each petition on its individual merits. App. 51a-52a. In its Final Rule, EPA stated that it "expects . . . relatively few petitions might be submitted for review. . . ." 51 Fed. Reg. 40,572, 40,578.

³ The eleven members of Congress included two who chaired committees with substantial responsibility for overseeing EPA's activities and determining its budget as well as several other influential members of such committees. See *EPA Plan to Carry Out Waste*

3. EPA's decision to adopt a BDAT-only approach prompted numerous legal challenges, of which only two are relevant here. First, Chemical Manufacturers Association (CMA), a petitioner below, argued that the statute *requires* EPA to adopt a risk-based approach in conjunction with a technology-based approach. CMA pointed out that, as EPA itself had emphasized in its Proposed Rule, application of the BDAT-only standard will often result in "treatment for treatment's sake," something Congress could not have intended.⁴ See App. 57a. Second, intervenor API (petitioner herein), intervenor Edison Electric Institute, and CMA argued that EPA had not provided a permissible explanation for abandoning its original approach in favor of the BDAT-only standard.

The court of appeals, per curiam, held that EPA had completely failed to give any meaningful explanation for its ultimate choice. "In order fully to convey the inadequacy of EPA's explanation," the majority reproduced it "at length." App. 18a. As the majority summarized it, EPA's explanation consisted solely of a blind submission to political pressure:

EPA's "rationale" . . . is that several members of Congress (among others) urged upon it the claim that Proposition X ("Congress mandated BDAT") requires Result A ("EPA adopts BDAT"), and that although Proposition X is inaccurate, the best response to the commenters is to adopt Result A.

Id. at 21a. The court emphatically rejected EPA's logic on the grounds that "members of Congress have no power, once a statute has been passed, to alter its interpretation by post-hoc 'explanations' of what it means." *Id.* at 20a.

Law's Land Ban "Fatally Flawed," Members of Congress Say,
Daily Rep. for Execs. (BNA) No. 47, at A-8 (March 11, 1986).

⁴ CMA argued, for example, that the application of BDAT would require in many instances that waste water be treated to a greater degree of purity for land disposal than EPA standards would require for drinking water. See App. 15a-16a.

Notwithstanding this holding, the majority nevertheless went on to decide whether the agency's action satisfied the two-step analysis set forth in *Chevron v. Natural Resources Defense Council*, 467 U.S. 837, 842-45 (1984).⁵ First, under *Chevron* Step One, the court held that § 3004(m) does not preclude a BDAT-only approach. App. 13a-14a. Next, under *Chevron* Step Two, the court argued that the BDAT-only approach was a "reasonable" interpretation of the statute. *Id.* at 14a-17a.

The essence of the majority's Step Two analysis was that it was reasonable for EPA to rely exclusively on BDAT to set treatment standards in light of "the uncertainties inherent" in relying upon any risk-based approach. *Id.* at 17a. Indeed, the majority developed detailed responses to each of the arguments raised concerning the reasonableness of a BDAT-only approach. *Id.* at 14a-17a. Nowhere in the Final Rule, however, had EPA adopted any of these arguments.

Despite the lack of any EPA explanation in the Final Rule, the majority of the court stated that it was not precluded from conducting its inquiry, under *Chevron* Step Two, into the reasonableness of the BDAT-only approach. The majority stated that it was sufficient, under *Chevron*, that its theory be drawn from statements published in the Proposed Rule and from the briefs submitted by EPA's counsel. *Id.* at 17a. The majority expressly rejected (*id.*) the suggestion of the concurring judge that only an agency's final rule, and "not its prior musings, nor, ordinarily, its post hoc explanations in court are proper subjects of judicial review." *Id.* at 38a-39a n.1 (opinion of Silberman, J.) (citations omitted).

Although the majority upheld the Final Rule under *Chevron*, it did not immediately affirm. Instead, the majority concluded that it was necessary for the agency to explain adequately why it chose the (now judicially sanc-

⁵ See page 11, *infra* (quoting *Chevron*).

tioned) BDAT-only approach over the screening-level approach that the agency initially proposed. The court of appeals stayed issuance of the mandate for 90 days, and remanded to give EPA the opportunity to submit that explanation to the court or to withdraw the rule.

4. Judge Silberman concurred in part and in the result. Although he agreed with the majority's formal decision to remand, he sharply criticized the majority's "reasonableness" analysis as a radical departure from *Chevron*. According to Judge Silberman, it is "inappropriate" and "perhaps analytically impossible" for a court to consider whether an agency's statutory interpretation is "reasonable" where—as here—the agency has offered no legitimate explanation for its conclusion. *Id.* at 34a-35a (opinion of Silberman, J.).

Judge Silberman began by agreeing with the majority that EPA's explanation for its Final Rule "is utterly devoid of any rationale whatsoever." *Id.* at 37a. Moreover, he observed, an explicit agency rationale was especially necessary here to explain the Final Rule's remarkable severity—to explain, for instance, "how (and why) Congress would have intended EPA to require generators to treat the wastewaters they intended to pour *into* the ground to levels more pure than Congress requires for drinking water drawn *out of* the ground." *Id.* at 39a (emphasis in original). "More fundamentally, it is incumbent upon EPA to identify the incremental 'threats to human health and the environment' that it hopes to address by opting uniformly for more stringent technology-based standards in lieu of health-based standards of whatever origin." *Id.*

Judge Silberman explained that the same "explanation" that the majority found inadequate to explain the agency's preference for the BDAT-only approach is also inadequate to explain why that approach is itself a "reasonable" interpretation of the statutory mandate. Though he agreed with the majority that the statutory language does not

directly speak to the matter, he observed that this ambiguity suffices only to resolve Step One of the *Chevron* inquiry. *Id.* at 37a-38a. Step Two asks whether the agency has reasonably explicated the statute, and, absent any meaningful explication at all, there is simply no answer to this question. By labelling the agency's action "reasonable," "the majority ends up deferring not to an agency statutory construction, but rather simply to a result." *Id.* at 39a. "Assuming this judicial approach ever were permissible, surely after *Chevron* it no longer is." *Id.*

To Judge Silberman, the outcome of the remand was now obvious and entirely predictable. The court had already assured the agency that its interpretation of the statute was reasonable and had provided EPA with a rationale that the court had already determined would be adequate. Moreover, the panel, by retaining jurisdiction, had effectively assured the agency that it would summarily affirm the Final Rule if EPA simply parroted the court's own logic. The court's remand was therefore an affirmation in everything but name—"an empty gesture, one which conforms to principles of judicial review of agency policymaking only in form." *Id.* at 41a.

6. On February 12, 1990, EPA filed a "Notice of Compliance" with the court's order, retaining the BDAT-only approach and formally adopting the court's suggested rationale that the BDAT-only approach was appropriate because "uncertainties currently remain relating to assessing wastes' toxicity." See App. 74a. The agency saw no need to propose, or to give interested parties any formal opportunity to comment on, the "Notice." *Id.* at 76a-77a. On March 14, 1990 without requesting further briefing, the court, without supplemental opinion, summarily dismissed the petitions for review.

REASONS FOR GRANTING THE PETITION

The procedure and analysis employed by the court of appeals has expanded greatly and perniciously its authority to substitute its judgment for that of an administrative agency in any of the numerous instances where that agency has failed adequately to explain the basis for its actions. Instead of leaving the matter after remand to an open-minded, independent inquiry and investigation, the court has empowered itself to circumscribe narrowly the realistic choices an agency has on remand by telling the agency what it may say and how to say it in order to obtain judicial approval. As if the unambiguous judicial directive were not enough incentive to adopt a particular interpretation or rule, in this approach the court of appeals also retains jurisdiction to affirm the agency's action on remand without further notice and comment procedures and without further briefing. No federal agency in these circumstances can reasonably be expected to withstand the temptation simply to conform to the advice of the court, especially when the court's rationale supports an outcome that the agency previously selected, albeit for wholly impermissible reasons. In sum, the holding below completely undermines the notion of an independent administrative process, which lies at the core of *Chevron*.

The majority's approach flouts *Chevron* in two principal ways. First, it effectively construes *Chevron* as a repudiation of the basic principle, established in *SEC v. Chenery Corp.*, 318 U.S. 80, 87, 92-95 (1943) (*Chenery I*) and *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947) (*Chenery II*), that an *agency*, and not a reviewing court, must supply the explanation needed to determine whether the agency has acted within the scope of its delegated authority. Yet, instead of repudiating *Chenery*, *Chevron* builds upon it and clarifies its application to judicial review of an agency's statutory interpretation. Second, the majority turns *Chevron* on its head: it effectively trans-

forms a principle requiring *judicial* deference to *agency* interpretation into a vehicle for promoting *agency* submission to *judicial* interpretation.

1. In *Chevron v. Natural Resources Defense Council*, 467 U.S. 837 (1984), this Court declared:

When a court reviews an agency's construction of the statute which it administers, it is confronted with two questions. First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter. . . . If, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.

Id. at 842-43 (footnotes omitted). Courts and commentators refer to the preliminary inquiry—"whether Congress has directly spoken to the precise question at issue"—as "Step One" of the *Chevron* analysis. Accordingly, "Step Two" enters the picture only where the court determines that Congress did not specifically require a particular interpretation of the statute. Step Two considers whether the agency's interpretation is "reasonable." *Id.* at 844. If it is, then the reviewing court must defer to it. *Id.*

Inextricably intertwined with *Chevron's* deference requirement is another fundamental principle of administrative law:

[A] reviewing court, in dealing with a determination or judgment which an administrative agency alone is authorized to make, must judge the propriety of such action solely by the grounds invoked by the agency. If those grounds are inadequate or im-

proper, the court is powerless to affirm the administrative action by substituting what it considers to be a more adequate or proper basis.

Cheney II, 332 U.S. at 196; accord *Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 43, 50 (1983); *Federal Power Comm'n v. Texaco*, 417 U.S. 380, 397 (1974); *Burlington Truck Lines v. United States*, 371 U.S. 156, 168-69 (1962). To invent support for a rule that the agency itself did not justify "would propel the court into the domain which Congress has set aside exclusively for the administrative agency." *Cheney II*, 332 U.S. at 196.

Chevron and *Cheney* spring from the same source: the need to ensure that agencies—not courts—administer statutes in a rational and politically responsible way. Both *Chevron* and *Cheney* forbid courts to corrupt the administrative process by performing the kinds of interpretive tasks that Congress has delegated to the agencies.

Although *Chevron* does not refer explicitly to *Cheney*, it seems plain that a court must adhere to the *Cheney* principle in conducting its inquiry under Step Two of *Chevron*. Step Two requires courts to consider whether an agency's interpretation is "reasonable." 467 U.S. at 844. The *Cheney* principle permits courts to do this because, in the normal course of events, an agency has supplied an explanation—more or less persuasive—to support its interpretation. Under *Cheney*, such "grounds invoked by the agency," 332 U.S. at 196, must be the sole subject of the court's reasonableness inquiry. Yet where, as here, the agency has provided no legitimate explanation on the merits, a court cannot pass on the "reasonableness" of the interpretation without propelling itself "into the domain which Congress has set aside exclusively for the administrative agency." *Id.* In short, when Congress implicitly delegates to an agency the authority to construe an open-ended statute, the agency itself must supply the reasoned basis for a given

interpretation. A court may *review* the agency's position, but it may not approach the task of statutory interpretation *de novo*.⁶

In the present case, Congress gave EPA the authority to implement RCRA and, thereby, to interpret, where necessary, § 3004(m). Whether EPA's interpretation is "reasonable" under *Chevron* depends upon the agency's grounds for adopting it. Yet political pressure was EPA's only articulated basis for rejecting its original rule in favor of the BDAT-only approach. Because EPA completely ignored the actual merits of that approach, the court was wrong to judge the "reasonableness" of the interpretation "by substituting what it considers to be a more adequate . . . basis." *Cheney II*, 332 U.S. at 196.⁷

The majority below claimed to base its "reasonableness" judgment upon several EPA observations published in the Proposed Rule—which, of course, had *rejected* the BDAT-only approach (see p. 4, *supra*)—and upon state-

⁶ Here, for example, the court of appeals was presented essentially with two challenges to the Final Rule: CMA's claim that the statute *required* EPA to use a risk-based approach; and API's argument that EPA's rationale for choosing a technology-only approach was inadequate. The court rejected CMA's argument and held that a risk-based approach was *not required*, but agreed with API that the explanation for the technology-only approach was entirely inadequate. At that point, the logical, traditional result should have been for the court to remand to EPA to consider anew its approach in a new proceeding and, if EPA chose to retain technology-only, to develop an adequate rationale *of its own*. There was no need, and indeed it was highly unorthodox, for the court to go on, as it did, to hold that the technology-only approach was reasonable and to provide a judicial rationale for that approach.

⁷ To be sure, the court of appeals did not literally *affirm* EPA's rule but, rather, "remanded" the case to the agency for a decision to withdraw the rule or to retain it and provide a formal justification. Yet the result of this remand was obvious and entirely predictable. See page 9, *supra*. In effect, the court's remand was an affirmation in everything but name or, to repeat Judge Silberman's apt characterization, "an empty gesture." App. 41a.

ments in the briefs submitted by EPA's counsel. See App. 17a. As Judge Silberman pointed out, however, "only the agency's explanation of its ultimate choice, not its prior musings nor, ordinarily, its post hoc explanations in court are proper subjects of judicial review." App. 38a-39a n.1 (citations omitted); accord *American Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490, 539 & n.73 (1981); *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 419 (1971). The decision of the Court of Appeals to make these the subjects of its review implies that the court may apply the *Chevron* Step-Two analysis to an unjustified agency rule whenever the court can extract some support for the rule from somewhere in the record or from the agency's brief. Because a court can almost always find support for an interpretation in one or both of these sources, the practical result of this approach is, again, to "propel the court into the domain which Congress has set aside exclusively for the administrative agency." *Cheney II*, 332 U.S. at 196.

2. *Chevron* reaffirmed that the primary authority to interpret congressional policies should lie with the administrative agencies that implement them, not with courts. *Chevron*, 467 U.S. at 843-45. That courts should generally defer to an agency's statutory interpretation is the central principle of *Chevron*. The opinion below stands that principle on its head. Instead of deferring to the agency's articulation of reasons for the Final Rule, the court supplied its own—and remanded to the agency for what predictably turned out to be essentially a reiteration of the court's logic. In practical effect, this approach produces *agency* deference to—and reliance upon—*judicial* interpretation of statutes.

This anti-*Chevron* dynamic may work serious mischief on two levels. First, in the short run, as in cases like this, the court's provision of a post-hoc rationale gives the agency an incentive to embrace the procedurally defective status quo. On remand, the agency can be certain of one thing: if it parrots the court's logic, it can

guarantee subsequent judicial validation of its interpretation. The court lobs the logic down, the agency bats the logic back and perfunctorily rounds the bases while the court looks on with approval. Nowhere in this process does the agency have any incentive seriously to reevaluate its decision. Instead, the agency has a compelling incentive to adopt the court's post-hoc rationale for the status quo, which effectively has been pre-approved, and which is obviously the path of least resistance.⁸

In the present case, for instance, EPA had no incentive to correct the procedural defect that underlies this lawsuit, *i.e.*, its abdication of reason in the face of political pressure. Thus, it is still uncertain what decision the agency would have rendered if it had been required to explain its choice *de novo*—that is, if the court had simply remanded the inadequate Final Rule for further rule-making proceedings without supplying the agency with an approved explanation.

It is quite possible, for instance, that the agency would have returned to the choice it originally made before it faced political pressure. If ever there were a case where a court should have forced an agency to produce its *own* explanation for its actions, it is a case where, as here, the agency explicitly acknowledged that it had succumbed to political pressure. Yet here, the court simply compounded the agency's error by providing strong *judicial* incentive to preserve the tainted result. This process is

⁸ The D.C. Circuit has strayed far from its position in 1978, when it declared:

[W]e must recognize the danger that an agency, having reached a particular result, may become so committed to that result as to resist engaging in any genuine reconsideration of the issues. The agency's action on remand must be more than a barren exercise of supplying reasons to support a pre-ordained result. *Post-hoc* rationalizations by the agency on remand are no more permissible than are such arguments when raised by appellate counsel during judicial review.

Food Marketing Inst. v. ICC, 587 F.2d 1285, 1290 (1978).

particularly prejudicial to the rights and interests of affected parties because it allows the agency to submit its pre-approved rationale directly to the court for a “rubberstamp” affirmation without supplemental briefing or even a supplemental opinion.

The opinion below is pernicious on a second level as well. It raises the specter that, over time, courts may well continue to misconstrue *Chevron* and to offer their own theories for the reasonableness of agency interpretation. If this happens, agencies may start relying on courts to “rescue” them from the “predicament” of articulating justifications for difficult policy choices. See App. 41a (Silberman, J., concurring). Such reliance would be especially likely where, as here, the agency has a political incentive to arrive at one particular outcome to the exclusion of various alternatives that a reasoned inquiry might support. Agencies would be prompted increasingly to rely upon the post-hoc rationalizations of their lawyers, see, e.g., *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 419 (1971), because they could count on reviewing courts to rely upon those rationalizations as well.

3. This Court should grant certiorari to clarify the essential role that the *Cheney* principle plays in a proper *Chevron* analysis, and to prevent future distortions of the administrative process. The court should then remand the case for additional proceedings.

Only additional proceedings untainted by efforts of other branches of government to interfere with the executive’s function will enable us to know whether EPA rejected its original approach in favor of the BDAT-only standard because, in its expert judgment, the latter approach best promotes the statutory policies, or because, in a continuing spirit of submission, the agency simply parroted the court of appeals’ reasoning.⁹ As matters

⁹ It bears mention that almost four years have elapsed since EPA promulgated its Final Rule. In that time a new administrator has

stand now, petitioners have not had a full or fair opportunity to challenge the "agency's" revised explanation for its Final Rule.¹⁰ That revised explanation appeared only in the agency's "Notice of Compliance," without the benefit of prior notice and comment rulemaking procedures (see App. 76a-77a) and the court that effectively wrote the draft for the Notice of Compliance summarily affirmed it without further briefing.

The court of appeals' distortion of *Chevron* will be influential because it provides the court with discretionary authority to influence, if not control, the substantive decisions of federal regulatory agencies. If a majority of a reviewing court agrees with the decision of the agency but finds its explanation inadequate, then the majority can employ this new procedure to ensure that on remand the agency reaffirms its prior position. On the other hand, if the majority not only finds the agency's explanation wanting but also disagrees with the agency's solution, then it simply remands to the agency in the expectation that the matter will be fully reconsidered. In effect, the majority could dictate the regulatory outcome strictly by the appellate process it follows. Such a dangerous practice would be all the worse because it arises in the D.C. Circuit which reviews the lion's share of

assumed the leadership of EPA. Moreover, there may have been technological or methodological advances in the interim that are relevant to the process of setting screening levels and that deserve fresh attention.

¹⁰ Because the D.C. Circuit's handling of EPA's Final Rule was so unusual and confusing, API also has challenged EPA's final action as reflected in the so-called "Notice of Compliance" itself. The petition for review of that action is now pending in the D.C. Circuit (*American Petroleum Institute v. EPA*, No. 90-1268). In that action, however, the government has taken the position that the issues on which API seeks review have been "finally adjudicated," and that there is no basis for further review in the D.C. Circuit. See EPA's Nonopposition To Petitioner's Motion To Defer Further Proceedings, No. 90-1268 (dated July 5, 1990).

federal agency rulemaking decisions. It is therefore vital that the Court grant the petition in this case to determine whether the court of appeals' assault on *Chevron* will be tolerated.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted,

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APPENDICES

APPENDICES

APPENDIX A

**UNITED STATES COURT OF APPEALS
DISTRICT OF COLUMBIA CIRCUIT**

Nos. 86-1657, 86-1677, 87-1016
and 87-1057

HAZARDOUS WASTE TREATMENT COUNCIL,
Petitioner,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Respondent,

EDISON ELECTRIC INSTITUTE, *et al.*,
CHEMICAL MANUFACTURERS ASSOCIATION,
Intervenors.

Argued March 22, 1989

Decided Sept. 15, 1989

Before WALD, Chief Judge, SILBERMAN and D.H.
GINSBURG, Circuit Judges.

Opinion PER CURIAM.

Opinion concurring in part and concurring in the result filed by Circuit Judge SILBERMAN.

PER CURIAM:

In 1984, Congress amended the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6921-6991

(1982 & Supp. IV 1986), to prohibit land disposal of certain hazardous solvents and wastes containing dioxins except in narrow circumstances to be defined by Environmental Protection Agency ("EPA") regulations. See Hazardous and Solid Waste Amendments, § 201(a), 42 U.S.C. § 6924(e) (Supp. IV 1986). In these consolidated cases, petitioners seek review of EPA's final "solvents and dioxins" rule published pursuant to Congress' 1984 mandate. We conclude that the rule under review is consistent with RCRA, but remand one aspect of the rule-making to the agency for further explanation.

I.

A. *Statutory Scheme.*

The Hazardous and Solid Waste Amendments of 1984 ("HSWA"), Pub.L. No. 98-616, 98 Stat. 3221 (1984), *inter alia*, substantially strengthened EPA's control over the land disposal of hazardous wastes regulated under RCRA's "creadle to grave" statutory scheme. In preambular language to the HSWA, Congress, believing that "land disposal facilities were not capable of assuring long-term containment of certain hazardous wastes," expressed the policy that "reliance on land disposal should be minimized or eliminated." 42 U.S.C. § 6901(b) (7). In order to effectuate this policy, HSWA amended section 3004 of RCRA to prohibit land disposal of hazardous waste unless the waste is "pretreated" in a manner that minimizes "short-term and long-term threats to human health and the environment," *id.* § 6924(m), or unless EPA can determine that the waste is to be disposed of in such a fashion as to ensure that "there will be no migration of hazardous constituents from the disposal [facility]. . ." *Id.* § 6924(d)(1), (e)(1), & (g)(5).

As amended, RCRA requires EPA to implement the land disposal prohibition in three phases, addressing the

most hazardous "listed" wastes first. *See id.* § 6924(g).¹ In accordance with strict statutory deadlines, the Administrator is obligated to specify those methods of land disposal of each listed hazardous waste which "will be protective of human health and the environment." *Id.* In addition, "[s]imultaneously with the promulgation of regulations . . . prohibiting . . . land disposal of a particular hazardous waste, the Administrator" is required to

promulgate regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized.

Id. § 6924(m).

Respecting two categories of hazardous wastes, including the solvents and dioxins at issue here² Congress, however, declined to wait for phased EPA implementation of the land disposal prohibition. For these wastes, Congress imposed earlier restrictions, prohibiting land disposal after dates specified in the HSWA except in accordance with pretreatment standards or pursuant to

¹ EPA was given the task of dividing the wastes presently "listed" as hazardous under RCRA into thirds according to their "intrinsic hazard," 42 U.S.C. § 6924(g)(2) (Supp. IV 1986). In keeping with RCRA's deadline, the resulting schedule, promulgated in 1986, *see* 51 Fed.Reg. 19,300 (1986), required EPA to implement the land disposal prohibition and promulgate treatment standards for each third by dates no later than 45, 55, and 66 months after enactment of the HSWA, respectively. *See* 42 U.S.C. § 6924(g)(4). One aspect of EPA's regulations governing the "first third" of these wastes was recently upheld on review in *Chemical-Waste Management, Inc. v. EPA*, 869 F.2d 1526 (D.C.Cir.1989).

² The other category is the so-called "California List" wastes, the rule for which is the subject of *Hazardous Waste Treatment Council v. Thomas*, 885 F.2d 918 (D.C.Cir.1989).

regulations specifying "protective" methods of disposal. *Id.* § 6924(e)(1). These prohibitions, as applied to the solvents and dioxins listed in the HSWA, were to take effect November 8, 1986. *Id.*

In order to further RCRA's basic purpose of mandating treatment of hazardous wastes in lieu of land disposal, Congress further provided that storage of wastes falling within the land disposal prohibition would be "prohibited unless such storage is solely for the purpose of the accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal." *Id.* § 6924(j). Congress believed that permitting storage of large quantities of waste as a means of forestalling required treatment would involve health threats equally serious to those posed by land disposal, and therefore opted in large part for a "treat as you go" regulatory regime.

B. *The Rulemaking Under Review.*

In January 1986, EPA issued a notice of proposed rule-making announcing its draft implementation of the land disposal prohibition for solvents and dioxins. See 51 Fed. Reg. 1602 (1986) (hereinafter "Proposed Rule"). Approximately ten months later, after receiving extensive public commentary on the draft blueprint, EPA published a final solvents and dioxins rule differing in some respects from its draft approach. See 51 Fed. Reg. 40,572 (1986) (hereinafter "Final Rule"). These differences were especially striking in EPA's implementation of section 3004(j) and section 3004(m) of RCRA, governing the storage prohibition and treatment standards, respectively, for solvents and dioxins. These portions of the rule, together with other discrete portions of the rule-making faulted by petitioners, are summarized below.

1. *Section 3004(m) Treatment Standards.*

In the Proposed Rule, EPA announced its tentative support for a treatment regime embodying both risk-

based and technology-based standards. The technology-based standards would be founded upon what EPA determined to be the Best Demonstrated Available Technology ("BDAT"); parallel risk-based or "screening" levels were to reflect "the maximum concentration [of a hazardous constituent] below which the Agency believes there is no regulatory concern for the land disposal program and which is protective of human health and the environment." Proposed Rule at 1611. The Proposed Rule provided that these two sets of standards would be melded in the following manner:

First, if BDAT standards were more rigorous than the relevant health-screening levels, the latter would be used to "cap the reductions in toxicity and/or mobility that otherwise would result from the application of BDAT treatment[.]" *Id.* Thus, "treatment for treatment sake" would be avoided. Second, if BDAT standards were less rigorous than health-screening levels, BDAT standards would govern and the screening level would be used as "a goal for future changes to the treatment standards as new and more efficient treatment technologies become available." *Id.* at 1612. Finally, when EPA determined that the use of BDAT would pose a greater risk to human health and the environment than land disposal, or would provide insufficient safeguards against the threats produced by land disposal, the screening level would actually become the 3004(m) treatment standard. *Id.*

EPA invited public comment on alternative approaches as well. The first alternative identified in the Proposed Rule (and the one ultimately selected by EPA) was based purely on the capabilities of the "best demonstrated available technology." *Id.* at 1613. Capping treatment levels to avoid treatment for treatment's sake, according to EPA, could be accomplished under this technology-based scheme by "the petition process":

Under this approach, if a prescribed level or method of treatment under section 3004(m) resulted in con-

centration levels that an owner/operator believed to be overly protective, the owner/operator could petition the Agency to allow the use of an alternative treatment level or method or no treatment at all by demonstrating that less treatment would still meet the petition standard of protecting human health and environment.

Id. at 1613. And the function served by health-screening levels of providing a default standard when the application of BDAT technology would itself pose a threat to human health and the environment could likewise be fulfilled by the petition process: "an owner operator could[] petition the Agency . . . to allow continued land disposal of the waste upon a demonstration that land disposal of the waste would not result in harm to human health and the environment." *Id.*

The Agency received comments supporting both approaches, but ultimately settled on the pure-technology alternative. Of particular importance to EPA's decision were the comments filed by eleven members of Congress, all of whom served as conferees on the 1984 RCRA amendments. As EPA recorded in the preamble to the Final Rule:

[these] members of Congress argued strongly that [the health screening] approach did not fulfill the intent of the law. They asserted that because of the scientific uncertainty inherent in risk-based decisions, Congress expressly directed the Agency to set treatment standards based on the capabilities of existing technology.

The Agency believes that the technology-based approach adopted in [the] final rule, although not the only approach allowable under the law, best responds to the above stated comments.

Final Rule at 40,578.

EPA also relied on passages in the legislative history supporting an approach under which owners and opera-

tor of hazardous waste facilities would be required to use "the best [technology] that has been demonstrated to be achievable." *Id.* (quoting 103 CONG.REC. S9178 (daily ed. July 25, 1984) (statement of Senator Chafee). And the agency reiterated that the chief advantage offered by the health-screening approach—avoiding "treatment for treatment's sake"—could "be better addressed through changes in other aspects of its regulatory program." *Id.* As an example of what parts of the program might be altered, EPA announced that it was "considering the use of its risk-based methodologies to characterize wastes as hazardous pursuant to section 3001 [of RCRA]." *Id.*; see 42 U.S.C. § 6921 (1982 & Supp. IV 1986).³

Petitioner CMA challenges this aspect of the rule as an unreasonable construction of section 3004(m)'s mandate to ensure that "short-term and long-term threats to human health and the environment are minimized." 42 U.S.C. § 6924(m) (1982 & Supp. IV 1986). In the alternative, CMA argues that EPA has failed to explain the basis—in terms of relevant human health and environmental considerations—for its BDAT regime, which allegedly requires treatment in some circumstances to levels far below the standards for human exposure under other statutes administered by EPA. Thus, CMA claims that EPA's action in promulgating a technology-based rule is arbitrary and capricious.

³ Under section 3001, the Administrator is empowered to list particular wastes as hazardous, and thus within RCRA's ambit, "taking into account toxicity, persistence, [] degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics." 42 U.S.C. § 6921(a) (1982). The statute provides that the Administrator "shall [] revise[] [these lists] from time to time as may be appropriate." *Id.* EPA's current list is set forth at 40 C.F.R. Part 261, Subparts C and D.

2. Section 3004(j) Storage Prohibition.

Section 3004(j) of RCRA, as noted above, prohibits the storage of wastes falling within a land prohibition "unless such storage is solely for the purpose of the accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal," 42 U.S.C. § 6924(j) (1982 & Supp. IV 1986). In the Proposed Rule, EPA tentatively implemented this provision to allow generators to accumulate hazardous wastes on-site for up to 90 days, no questions asked. EPA selected this period in the belief "that it would allow a reasonable period for accumulation prior to further management without interfering with a generator's production process[.]" Proposed Rule at 1709. It observed that as a matter of prevailing industrial practice "most wastes were removed from the site of generation within 90 days." *Id.* Nevertheless, out of concern that "a longer time may, in some cases, be necessary to accumulate sufficient quantities to facilitate proper recovery, treatment, or disposal," *id.*, the agency solicited comments on alternative storage periods that might be appropriate.

The comments received by the Agency ranged far and wide, but all found the 90-day period inadequate. A majority of the commentors favored a one-year storage period in order to accommodate small-quantity generators and others whose waste streams "accumulate[] more slowly than others." Final Rule at 40,582. On the basis of these remarks, EPA agreed that 90 days was an insufficient period for the adequate accumulation of wastes to facilitate recovery, treatment or disposal.

EPA ultimately settled on a one-year storage period, but the implementing regulation differed significantly in character from the 90-day proposal. The Final Rule provides:

An owner/operator of a treatment facility may store
[] wastes for up to one year unless the Agency can

demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

Id. at 40,643 (emphasis added) (codified at 40 C.F.R. § 268.50(b) (1988)). A companion provision requires owners and operators to bear the burden of proving that storage for over a one-year period was for proper purposes under RCRA. See *id.* (codified at 40 C.F.R. § 268.50(c) (1988)).

Characterizing the final storage rule, in effect, as a "shifting of the statutory burden of proof" which "effectively allows a one year override of the statutory prohibition" against storage, petitioners Hazardous Waste Treatment Council ("HWTC") and the Natural Resources Defense Council ("NRDC") challenge the rule as inconsistent with section 3004(j) of RCRA.

3. Responsibility for Testing Wastes Prior to Disposal.

A determination as to whether and to what degree treatment of a waste is required prior to land disposal depends upon the concentration of hazardous constituents in the waste. To facilitate these determinations and to ensure compliance with the land disposal prohibitions and applicable treatment standards, EPA proposed to implement requirements for mandatory testing in some circumstances. Proposed Rule at 1691.

The Agency was immediately confronted with the question of who, among generators, treatment facilities and land disposal facilities, should shoulder the responsibility of testing the waste prior to disposal. While several alternatives were available, EPA initially proposed that the land disposal facility alone be responsible for such testing. Proposed Rule at 1692.

Under this approach, the disposal facility must either conduct an analysis of the waste or obtain an analysis of the waste from the generator or treater. Similarly, the owner or operator of a land disposal facility could arrange for the generator or treatment facility to supply all or part of the required testing data. However, if the generator or treater did not supply the testing data and the land disposal facility owner or operator chose to accept the waste, the owner or operator would be responsible for conducting the required testing.

Id. at 1691. The agency cautioned that this approach did not leave the generator without responsibility altogether. The generator was still obliged to determine "whether he must treat his waste prior to disposal." *Id.* "[R]ather than specifically requiring the generator to conduct testing, [however], the Agency [proposed to] allow determination of whether wastes meet the regulatory thresholds to be based on either testing or knowledge of the characteristics of the waste." *Id.* The Agency found this proposal desirable because "[i]t is flexible, does not require redundant testing, fits into the current regulatory scheme for the waste analysis plan and requires the testing to take place where the liability for disposal exists—at the land disposal facility." *Id.* at 1691.

The Final Rule bears substantial resemblance to that initially proposed by EPA, with one principal exception. As the agency explained, "[b]ecause the [treatment] approach promulgated [in the Final Rule] does not cap BDAT with screening levels, more wastes will require treatment to meet the specified treatment standards." Final Rule at 40,597. Given this expanded role for the treatment industry, EPA decided in the Final Rule to impose testing requirements on both treatment facilities and land disposal facilities. But, the agency followed the proposed rule insofar as it did not require testing by

generators. *See id.* Thus, when sending waste to either a treatment facility for pretreatment or directly to a land disposal facility, the Final Rule permits generators to base their determinations as to the concentration of hazardous constituents in the waste on "waste analysis data, knowledge of the waste, or both." *Id.* No matter what the basis for their determinations, generators forwarding wastes directly to land disposal facilities must certify their conclusions to the facilities' operators. False certifications, under the Final Rule, may result in criminal penalties. *See* 40 C.F.R. § 268.7 (1988); *see also* 42 U.S.C. § 6928(d)(3) (Supp. IV 1986).

Petitioners HWTC and NRDC contend that it is arbitrary and capricious for EPA to require operators of treatment and land disposal facilities, but not generators, to test wastes within the land disposal prohibition.

II. SECTION 3004(M) TREATMENT STANDARDS

CMA challenges EPA's adoption of BDAT treatment standards in preference to the approach it proposed initially primarily on the ground that the regulation is not a reasonable interpretation of the statute. CMA obliquely, and Intervenors Edison Electric and the American Petroleum Institute explicitly, argues in the alternative that the agency did not adequately explain its decision to take the course that it did. We conclude, as to CMA's primary challenge, that EPA's decision to reject the use of screening levels is a reasonable interpretation of the statute. We also find, however, that EPA's justification of its choice is so fatally flawed that we cannot, in conscience, affirm it. We therefore grant the petitions for review to the extent of remanding this issue to the agency for a fuller explanation.

A. *The Consistency of EPA's Interpretation with RCRA.*

Our role in evaluating an agency's interpretation of its enabling statute is as strictly circumscribed as it is

simply stated: We first examine the statute to ascertain whether its clearly forecloses the course that the agency has taken; if it is ambiguous with respect to that question, we go on to determine whether the agency's interpretation is a reasonable resolution of the ambiguity. *Chevron v. Natural Resources Defense Council*, 467 U.S. 837, 842-45, 104 S.Ct. 2778, 2781-83, 81 L.Ed.2d 694 (1984).

1. Chevron Step I: Is the Statute Clear?

We repeat the mandate of § 3004(m)(1): the Administrator is required to promulgate "regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." 42 U.S.C. § 6924(m)(1).

CMA reads the statute as requiring EPA to determine the levels of concentration in waste at which the various solvents here at issue are "safe" and to use those "screening levels" as floors below which treatment would not be required. CMA supports its interpretation with the observation that the statute directs EPA to set standards only to the extent that "threats to human health and the environment are minimized." We are unpersuaded, however, that Congress intended to compel EPA to rely upon screening levels in preference to the levels achievable by BDAT.

The statute directs EPA to set treatment standards based upon either "levels or methods" of treatment. Such a mandate makes clear that the choice whether to use "levels" (screening levels) or "methods" (BDAT) lies within the informed discretion of the agency, as long as the result is "that short-term and long-term threats to human health and the environment are minimized." To "minimize" something is, to quote the Oxford English

Dictionary, to "reduce [it] to the smallest possible amount, extent, or degree." But Congress recognized, in the very amendments here at issue, that there are "long-term uncertainties associated with land disposal," 42 U.S.C. § 6924(d)(1)(A). In the face of such uncertainties, it cannot be said that a statute that requires that threats be minimized unambiguously requires EPA to set levels at which it is conclusively presumed that no threat to health or the environment exists.

Nor are we at all persuaded by CMA's interpretation of *NRDC v. EPA*, 824 F.2d 1146, 1163 (D.C.Cir.1987) (*en banc*), in which we held that EPA was not permitted to "substitute[] technological feasibility for health as the primary consideration under Section 112 [of the Clean Air Act]." That provision requires the Administrator to set air pollution standards "at the level which in his judgment provides an ample margin of safety to protect the public health." 42 U.S.C. § 7412(b)(1)(B). EPA had set emission standards for vinyl chloride, however, "based solely on the level attainable by the best available control technology," 824 F.2d at 1149, despite its finding that such levels would create health risks. It had neither stated that the risks it found were insignificant, nor explained how the risks it accepted were consistent with its statutory duty to provide "an ample margin of safety." *Id.* This court held that EPA had erred in failing to consider whether the best available technology was sufficient to provide the statutorily mandated margin of safety. *Id.* at 1164-66.

Contrary to CMA's implication, however, the court did not hold, or even imply, the converse—that EPA could not require generators to use technologies that would reduce emissions to a point *below* that which would provide an 'ample margin of safety.' Indeed, the court noted that "Congress . . . recognized in section 112 that the determination of what is 'safe' will always be marked by scientific uncertainty and thus exhorted the Administra-

tion to set . . . standards that will provide an ‘ample margin’ of safety,” *id.* at 1165; we then concluded that “[o]nce ‘safety’ is assured, the Administrator should be free to diminish as much of the statistically determined risk as possible by setting the standard at the lowest feasible level.” *Id.*

This is not to say that EPA is free, under § 3004(m), to require generators to treat their waste beyond the point at which there is no “threat” to human health or to the environment. That Congress’s concern in adopting § 3004(m) was with health and the environment would necessarily make it unreasonable for EPA to promulgate treatment standards wholly without regard to whether there might be a threat to man or nature. That concern is better dealt with, however, at *Chevron*’s second step; for, having concluded that the statute does not unambiguously and in all circumstances foreclose EPA from adopting treatment levels based upon the levels achievable by BDAT, we must now explore whether the particular levels established by the regulations supply a reasonable resolution of the statutory ambiguity.

2. *Chevron Step II: Is EPA’s Interpretation Reasonable?*

The screening levels that EPA initially proposed were not those at which the wastes were thought to be entirely safe. Rather, EPA set the levels to reduce risks from the solvents to an “acceptable” level, and it explored, at great length, the manifest (and manifold) uncertainties inherent in any attempt to specify “safe” concentration levels. The agency discussed, for example, the lack of any safe level of exposure to carcinogenic solvents, 51 Fed.Reg. at 1,628; the extent to which reference dose levels (from which it derived its screening levels) underestimate the dangers that hazardous solvents pose to particularly sensitive members of the population, *id.* at 1,627; the necessarily artificial assumptions that

accompany any attempt to model the migration of hazardous wastes from a disposal site, *id.* at 1,642-53; and the lack of dependable data on the effects that solvents have on the liners that bound disposal facilities for the purpose of ensuring that the wastes disposed in a facility stay there, *id.* at 1,714-15. Indeed, several parties made voluminous comments on the Proposed Rule to the effect that EPA's estimates of the various probabilities were far more problematic than even EPA recognized. *See, e.g.,* Comments of Natural Resources Defense Council, Record at 29,000-62.

CMA suggests, despite these uncertainties, that the adoption of a BDAT treatment regime would result in treatment to "below established levels of hazard." It relies for this proposition almost entirely upon a chart in which it contrasts the BDAT levels with (1) levels EPA has defined as "Maximum Contaminant Levels" (MCLs) under the Safe Drinking Water Act; (2) EPA's proposed "Organic Toxicity Characteristics," threshold levels below which EPA will not list a waste as hazardous by reason of its having in it a particular toxin; and (3) levels at which EPA has recently granted petitions by waste generators to "delist" a particular waste, that is, to remove it from the list of wastes that are deemed hazardous. CMA points out that the BDAT standards would require treatment to levels that are, in many cases, significantly below these "established levels of hazard."

If indeed EPA had determined that wastes at any of the three levels pointed to by CMA posed no threat to human health or the environment, we would have little hesitation in concluding that it was unreasonable for EPA to mandate treatment to substantially lower levels. In fact, however, none of the levels to which CMA compares the BDAT standards purports to establish a level at which safety is assured or "threats to human health and the environment are minimized." Each is a level established for a different purpose and under a different

set of statutory criteria than concern us here; each is therefore irrelevant to the inquiry we undertake today.

The drinking water levels, for example, are established under a scheme requiring EPA to set "goals" at a level at which "no known or anticipated adverse effects on the health of persons occur." 42 U.S.C. § 300g-1(b)(4). EPA is then to set MCLs as close to its goals as "feasible," taking into account, among other things, treatment costs. 42 U.S.C. §§ 300g-1(b)(4), (5). Since SDWA goals are set only to deal with "known or anticipated" adverse health effects, a mere "threat" to human health is not enough in that context. Moreover, SDWA levels are set without reference to threats to the environment. Finally, EPA must consider costs in setting its MCLs; there is no similar limitation in § 3004 of RCRA.

Similarly, in promulgating the OTC levels, EPA made clear that, "[i]n establishing a scientifically justifiable approach for arriving at [OTC levels], EPA wanted to assure a *high degree of confidence* that a waste which releases toxicants at concentrations above the [OTC level] would pose a hazard to *human health*." EPA Hazardous Waste Management System; Identification and Listing of Hazardous Waste . . . , Proposed Rule, 51 Fed.Reg. 21,648, 21,649 (1986) (emphases added). Thus it is clear that wastes with toxicant levels below the OTC thresholds may still pose "*threats to human health [or] the environment*." *Id.* at 21,648 (emphases added).

Finally, CMA points to the "delisting levels" as appropriate points of comparison. The term is a bit misleading, however. EPA delists particular wastes in response to individual petitions, *see, e.g.*, 42 U.S.C. § 6921(f)(1), and it has not adopted formal, or even *de facto*, levels below which any waste will be delisted. That EPA has delisted, in particular circumstances, wastes containing concentrations of solvents higher than those called for by the BDAT standards adds nothing to CMA's argument. The treatment standards establish a generic ap-

proach, requiring that all wastes deemed to be hazardous be treated to a set level in order to minimize threats to health and to the environment. If a waste is listed as hazardous, and an individual generator wants to dispose of it without meeting the BDAT standards, it may petition to have its particular waste delisted. If the agency grants the delisting petition, only the petitioner is affected; the generally required level of treatment remains the same. Hence, there is no inconsistency between a "delisting level," accepted in particular circumstances, that permits a higher level of a particular contaminant than the BDAT level otherwise generally applicable.

In sum, EPA's catalog of the uncertainties inherent in the alternative approach using screening levels supports the reasonableness of its reliance upon BDAT instead. Accordingly, finding no merit in CMA's contention that EPA has required treatment to "below established levels of hazard," we find that EPA's interpretation of § 3004(m) is reasonable.

Our concurring colleague suggests that our discussion of the reasonableness of the BDAT standard is unnecessary, if not "perhaps analytically impossible." Con.Op. at 371. Contrary to the impression given in his separate opinion, however, the basis upon which we find EPA's interpretation reasonable here is not one that we have supplied, but the one EPA itself put forth. In its Initial Rule document discussing BDAT as well as screening levels, and in its brief to this court, EPA has presented precisely the arguments we find persuasive here. While, as we shall see, those arguments are inadequate to justify the choice made, in the Final Rule, in favor of BDAT as against screening levels—which also seem to present a reasonable approach—they do demonstrate that the BDAT approach is reasonable.

B. *Was EPA's Explanation Adequate?*

The Supreme Court has made it abundantly clear that a reviewing court is not to supplement an agency's rea-

sions for proceeding as it did, nor to paper over its plainly defective rationale: "The reviewing court should not attempt itself to make up for such deficiencies [in the agency's explanation]; we may not supply a reasoned basis for the agency's action that the agency itself has not given." *Motor Vehicles Manufacturers Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43, 103 S.Ct. 2856, 2866-67, 77 L.Ed.2d 443 (1983) (*citing SEC v. Chenery Corp.*, 332 U.S. 194, 196, 67 S.Ct. 1575, 1577, 91 L.Ed. 1995 (1947)). "We will, however, 'uphold a decision of less than ideal clarity if the agency's path may reasonably be discerned.'" *Id.* (*quoting Bowman Transportation, Inc. v. Arkansas-Best Freight System, Inc.*, 419 U.S. 281, 286, 95 S.Ct. 438, 442, 42 L.Ed.2d 447 (1974)). Accordingly, in order to determine whether we can affirm EPA's action here, we must parse the language of the Final Rule to see whether it can be interpreted to make a sensible argument for the approach EPA adopted. We find that it cannot.

As we have said, EPA, in its Proposed Rule, expressed a tentative preference for an approach that combined screening levels and BDAT. It indicated that it thought either that approach or BDAT alone was consistent with the statute, and recognized that there were myriad uncertainties inherent in any attempt to model the health and environmental effects of the land disposal of hazardous wastes. It initially concluded, however, that despite those uncertainties, the better approach was to adopt the combination of screening levels and BDAT. Nevertheless, in the Final Rule, it rejected its earlier approach, and adopted a regime of treatment levels defined by BDAT alone.

In order fully to convey the inadequacy of EPA's explanation, we quote the relevant portion of the Final Rule at length:

Although a number of comments on the proposed rule favored the first approach; that is, the use of

screening levels to "cap" treatment that can be achieved under BDAT, several commenters, including eleven members of Congress, argued strongly that this approach did not fulfill the intent of the law. They asserted that because of the scientific uncertainty inherent in risk-based decisions, Congress expressly directed the Agency to set treatment standards based on the capabilities of existing technology.

The Agency believes that the technology-based approach adopted in today's final rule, although not the only approach allowable under the law, best responds to the above-stated comments. Accordingly, the final rule establishes treatment standards under RCRA section 3004(m) based exclusively on levels achievable by BDAT. The Agency believes that the treatment standards will generally be protective of human health and the environment. Levels less stringent than BDAT may also be protective.

The plain language of the statute does not compel the Agency to set treatment standards based exclusively on the capabilities of existing technology. . . . By calling for standards that minimize threats to human health and the environment, the statute clearly allows for the kind of risk-based standard originally proposed by the Agency. However, the plain language of the statute does not preclude a technology-based approach. This is made clear by the legislative history accompanying the introduction of the final section 3004(m) language. The legislative history provides that "[T]he requisite levels of [sic] methods of treatment established by the Agency should be the best that has been demonstrated to be achievable" and that "[T]he intent here is to require utilization of available technology in lieu of continued land disposal without prior treatment." (Vol. 130, Cong. Rec. 9178, (daily ed., July 25, 1984)). Thus, EPA is acting within the author-

ity vested by the statute in selecting [sic] to promulgate a final regulation using its proposed alternative approach of setting treatment standards based on BDAT.

The Agency believes that its major purpose in adopting the risk-based approach of the proposal (i.e., to allow different standards for relatively low-risk, low-hazard wastes) may be better addressed through changes in other aspects of its regulatory program. For example, EPA is considering the use of its risk-based methodologies to characterize wastes as hazardous pursuant to section 3001.

51 Fed.Reg. at 40,578.

To summarize: after EPA issued the Proposed Rule, some commenters, including eleven members of Congress, chastised the agency on the ground that the use of screening levels was inconsistent with the intent of the statute. They stated that because of the uncertainties involved, Congress had mandated that BDAT alone be used to set treatment standards. EPA determined that the "best respon[se]" to those comments was to adopt a BDAT standard. It emphasized, however, that either course was consistent with the statute (and that it was therefore not *required* to use BDAT alone). Finally, it asserted, without explanation, that its major purpose in initially proposing screening levels "may be better addressed through changes in other aspects of its regulatory program," and gave an example of one such aspect that might be changed.

This explanation is inadequate. It should go without saying that members of Congress have no power, once a statute has been passed, to alter its interpretation by post-hoc "explanations" of what it means; there may be societies where "history" belongs to those in power, but ours is not among them. In our scheme of things, we consider legislative history because it is just that: *history*.

It forms the background against which Congress adopted the relevant statute. Post-enactment statements are a different matter, and they are not to be considered by an agency or by a court as legislative history. An agency has an obligation to consider the comments of legislators, of course, but on the same footing as it would those of other commenters; such comments may have, as Justice Frankfurter said in a different context, "power to persuade, if lacking power to control." *Skidmore v. Swift & Co.*, 323 U.S. 134, 140, 65 S.Ct. 161, 164, 89 L.Ed. 124 (1944).

It is unclear whether EPA recognized this fundamental point. On the one hand, it suggested that the adoption of a BDAT-only regime "best respond[ed]" to the comments suggesting that the statute required such a rule. On the other hand, EPA went on at some length to establish that the comments were in error, in that screening levels are permissible under the statute. EPA's "rationale," in other words, is that several members of Congress (among others) urged upon it the claim that Proposition X ("Congress mandated BDAT") requires Result A ("EPA adopts BDAT"), and that although Proposition X is inaccurate, the best response to the commenters is to adopt Result A.

Nor is anything added by EPA's bald assertion that its reason for initially preferring Result B (screening levels) "may be" better served by other changes in the statutory scheme. In its Proposed Rule, EPA had, after extensive analysis of the various alternatives, come to the opposite conclusion. It is insufficient, in that context, for EPA to proceed in a different direction simply on the basis of an unexplained and unelaborated statement that it might have been wrong when it earlier concluded otherwise.

In the entire relevant text of the Final Rule, EPA neither invokes nor discusses the uncertainties inherent in the land disposal process in support of its determina-

tion to use BDAT. EPA's only mention of the concept is in its description of the commenters' argument that, because of such uncertainties, Congress mandated BDAT—an argument that EPA rejected. While it may be that EPA intended that reference to act as an incorporation of all the uncertainties it outlined in its Proposed Rule, or all the many challenges to its assumptions that commenters submitted in response to the Proposed Rule, that intent, if indeed it exists, is so shrouded in mist that for this court to say that we could discern its outlines would be as illogical as the agency's explanation in the Final Rule itself.

Accordingly, we grant the petitions for review in this respect.

III. SECTION 3004(j) STORAGE PROHIBITION

HWTC and NRDC contend that the Administrator's regulation allowing generators to store wastes on-site for periods of up to one year unless EPA "can demonstrate that such storage was not solely for the purpose of accumulati[ng]" quantities of waste suitable for treatment, 40 C.F.R. § 268.50(b) (1988), violates Congress' "plain intent" in enacting section 3004(j) of RCRA. According to these petitioners, this provision's flat prohibition against storage of wastes "unless such storage is solely for [proper purposes]," 42 U.S.C. § 6924(j) (Supp. V 1987), requires *generators*—and not EPA—to bear the burden of proving that their motives in storing prohibited wastes are consistent with section 3004(j), no matter what the circumstances. "By shifting the statutory burden of proof of EPA . . .", we are told, "the rule effectively allows a one year override of the statutory prohibition."

It is unclear to what petitioners refer when they speak of the "statutory burden of proof." At common law, the "burden of proof" concept bore two somewhat dissimilar meanings. In classical applications, the party carrying

the burden of proof bore the risk of nonpersuasion of the factfinder; in other words, the "burden of proof" customarily implied the "burden of persuasion." 9 WIGMORE, EVIDENCE § 2486 (Chadbourn rev. 1981). A secondary meaning developed, however, in service of the role of the trial judge in the common-law tribunal. To enable the judge "to keep the jury within the bounds of reasonable action," the party bearing the burden of proof had a threshold responsibility of satisfying the judge that sufficient evidence had been advanced "to form a reasonable basis for the verdict." *Id.* § 2487, at 293. The discharge of this so-called "burden of production" was a prerequisite, at common law, to getting one's case to the jury at all.

In administrative proceedings, the APA provides a default rule for allocating proof burdens when regulatory statutes do not set forth separate rules. Specifically, "the proponent of a rule or order," usually the agency in proceedings charging statutory violations, "has the burden of proof." 5 U.S.C. § 556(d) (1982). We have held, though, that the APA uses the term in its secondary application; "the 'burden of proof' it casts upon the 'proponent' is the burden of coming forward with proof, and not the ultimate burden of persuasion." *Environmental Defense Fund, Inc. v. EPA*, 548 F.2d 998, 1013 (D.C. Cir. 1976) cert. denied, 431 U.S. 925, 97 S.Ct. 2199, 53 L.Ed.2d 239 (1977); accord, *Old Ben Coal Corp. v. Interior Bd. of Mine Operations Appeals*, 523 F.2d 25, 30 (7th Cir. 1975). As the House Report accompanying the APA explains, "section [556(d)] means that every proponent of a rule or order or the denial thereof has the burden of coming forward with sufficient evidence therefor." H. REP. No. 1980, 79th CONG., 2d SESS. 34 (1946), U.S. Code Cong. & Admin. News 1946, p. 1195. While the locus of the ultimate burden of persuasion may be unclear—indeed, it may rest on the opponent of an agency order, see 3 K. DAVIS, ADMIN. L. TREATISE § 16.9 at 258 (2d ed. 1980)—it is beyond doubt that the initial burden

of going forward with a *prima facie* case of unlawful conduct rests on the agency charging the statutory violation, unless the regulatory statute provides otherwise.

Insofar as petitioners allege that EPA has shifted this threshold burden of going forward from the regulated industry to itself in contravention of RCRA, their contention plainly runs aground on the APA.⁴ For under the APA's guiding provisions, "[no] agency is entitled to presume that the conduct of any person or status of any enterprise is unlawful or improper" unless the agency's organic statute provides otherwise. *Environmental Defense Fund, Inc.*, 548 F.2d at 1014-15 (quoting S.REP. No. 752, 79th Cong., 1st Sess. 22 (1945)); see also *Industrial Union Dept., AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 653 & n. 61, 100 S.Ct. 2844, 2869 & n. 61, 65 L.Ed.2d 1010 (1980) (opinion of Stevens, J.). Petitioners point to nothing in RCRA that purports explicitly or implicitly to alter the APA's background rule placing this threshold burden of going forward on the agency. The language of section 3004(j) is silent as to allocations of production burdens (or, for that matter, the ultimate burden of persuasion) between the agency (the charging party) and the regulated respondent. The legislative history of RCRA's storage prohibition, as cited to us by HWTC and NRDC, is equally unilluminating; it merely repeats the proscription of section

⁴ EPA has provided, with respect to its regulatory programs generally, that "[t]he complainant has the burden of going forward with *and of proving* that the violation occurred as set forth in the complaint. . . ." 40 C.F.R. § 22.24 (1988) (emphasis added). This regulation can be read as locating the burden of persuasion on the agency in proceedings under any of the statutes it administers; nevertheless, this passage was not cited to the court by either party and we therefore do not have the agency's interpretation of this regulation before us. In any event, as we note *infra*, RCRA does not speak to the allocation of production or persuasion burdens in administrative proceedings. To the extent petitioners allege a misallocation of the burden of persuasion under § 3004(j), as such, we reject that contention as well.

3004(j). And petitioners identify no other provision in the statute that so much as even addresses procedural burdens in administrative proceedings under RCRA. See generally 42 U.S.C. § 6928 (1982 & Supp. IV 1986) (governing enforcement proceedings). The Administrator's interpretation of section 3004(j) to comport with the procedural tradition of the APA can hardly be termed unreasonable in this setting. See *Chevron U.S.A. Inc. v. Natural Resources Defense Council*, 467 U.S. 837, 843, 104 S.Ct. 2778, 2782, 81 L.Ed.2d 694 (1984) ("if the statute is silent or ambiguous with respect to [a] specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute"). Were the Administrator, thus, to assess noncompliance penalties against a generator in the belief that the generator had accumulated prohibited wastes for improper purposes, the generator would be entitled to air the agency's charges in a public factfinding hearing. See 42 U.S.C. § 6928(b) (Supp. V 1987). And at any such hearing, the Administrator, as the "proponent" of the agency compliance order, would be required to come forward at least with a *prima facie* case suggesting improper storage. 5 U.S.C. § 556(d) (1982); see *Environmental Defense Fund, Inc.*, 548 F.2d at 1014-15; *Old Ben Coal Corp.*, 523 F.2d at 30. As we read the challenged regulation, as such, it simply sets forth in RCRA terminology the APA's default rule regarding the burden of production; to wit, "unless the Agency can demonstrate that [the generator's] storage [of prohibited wastes for less than one year] was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal," the storage will not be penalized under RCRA. The regulation shifts nothing; it places no evidentiary burden on the agency that it would not otherwise be required to bear under section 556(d).

The Administrator, to be sure, has published companion regulations providing, with respect to storage of pro-

hibited wastes for periods *greater* than one year, that "the owner/operator bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of waste as are necessary [for treatment]." 40 C.F.R. § 268.50(c) (1988). But this in no way suggests, as petitioners argue, that the Administrator has "reverse[d] the statutory presumption against storage" for periods of one year or less. Rather, the Administrator has simply determined (reasonably, we think) that producing evidence that a generator has stored prohibited wastes for a period greater than one year fulfills the agency's section 556(d) obligation to come forward in administrative proceedings with a *prima facie* case of unlawful storage. Once the Administrator makes such a *prima facie* showing, of course, the burden may permissibly shift to the generator to demonstrate that such lengthy storage was in fact motivated by legitimate considerations under RCRA. See *First Nat'l Bank of Bellaire v. Comp. of Currency*, 697 F.2d 674, 683 (5th Cir. 1983); *Environmental Defense Fund, Inc.*, 548 F.2d at 1014-15; *Old Ben Coal Corp.*, 523 F.2d at 30.

At bottom, what petitioners quarrel with is the precise point at which the Administrator can satisfy his initial burden of production in proceedings charging a section 3004(j) violation *solely* by introducing evidence of the duration of the generator's storage. Indeed, petitioners conceded at oral argument that they in all likelihood would not have challenged the Administrator's proposed rule—providing a 90-day storage window—had it been carried forward. But petitioners offer no basis to question the Administrator's professional judgment on this score. The record amply supports the Administrator's conclusion that aggregation of wastes for proper treatment may require accumulation for periods of up to one year. It was eminently reasonable, under the circumstances, for the Administrator to determine that he would have to come forward with more than the mere duration of storage for less than one year to make out a

prima facie case under section 3004(j). Accordingly, we hold that 40 C.F.R. § 268.50(b) is reasonable and consistent with RCRA.

IV. TESTING RESPONSIBILITY

As part of its implementation of the Hazardous and Solid Waste Amendments of 1984 ("HSWA"), Pub.L. No. 98-616, 98 Stat. 3221, the EPA developed an enforcement plan to assure that wastes that are prohibited from land disposal will not make their way into the ground. Under the EPA's scheme, restricted wastes will follow one of two paths. First, if the generator of the waste determines that he is managing a restricted waste and the waste does not meet the applicable treatment standards, he must notify the treatment facility of the appropriate treatment standards, *see* 40 C.F.R. § 268.7(a)(1); the treatment facility is then required, pursuant to 40 C.F.R. § 268.7(b), to test the treatment residue to assure that the waste, once treated, meets those standards before forwarding the waste to a land disposal facility,⁵ which is also required to test the waste, 40 C.F.R. § 268.7(c). Alternatively, if a generator determines that he is managing a restricted waste, but that the waste can be land disposed without further treatment, he may ship the waste directly to landfill operators, the final handlers of the waste who, under the EPA scheme, bear ultimate responsibility for testing and determining that land disposed wastes meet the applicable treatment standards. *See* 51 Fed.Reg. 40,597 (November 7, 1986).

Although earlier handlers of wastes—both waste generators and treatment facilities—are also required by the regulations to certify that waste leaving their control and marked for land disposal meets the appropriate treatment standards, only the latter are expressly required

⁵ As the EPA announced in the preamble to its final rules, "These testing requirements for treatment residuals apply to generators who treat, store, and dispose onsite." 51 Fed.Reg. at 40,598.

to *test* the waste in order to certify compliance. See 40 C.F.R. § 268.7(b). Generators of waste are “recommend[ed]” to conduct “a comprehensive analysis of each waste stream . . . at least annually,” 51 Fed.Reg. at 40,598, but in the end the agency’s regulations leave generators the option of certifying that their wastes comply with treatment standards on the basis of, *inter alia*, their “knowledge” of the waste:

If a generator determines that he is managing a restricted waste under this part, and determines that the waste can be land disposed without further treatment,

with each shipment of waste he must submit, to the land disposal facility, a notice and a certification stating that the waste meets the applicable treatment standards . . .

(ii) The certification must be signed by an authorized representative and must state the following:

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing *or through knowledge of the waste* to support this certification that the waste complies with the treatment standards specified in 40 C.F.R. Part 268 Subpart D and all applicable prohibitions set forth in 40 C.F.R. 268.32 or RCRA section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

40 C.F.R. § 268.7(a)(2) (*emphasis added*).

HWTC and NRDC challenge the agency’s decision to allow generators to rely on their knowledge to certify that wastes are within treatment standards. Petitioners note that wastes requiring treatment must be tested before being sent to land disposal facilities, and they therefore argue that it is arbitrary and capricious for the

agency to fail to require generators of waste to test their waste streams in order to certify that admittedly restricted wastes conform to the applicable treatment standards. They charge that since the applicable treatment standards are stated in terms of specific and minute concentrations of hazardous constituents, without actual test data, "generators cannot possibly determine whether their wastes are generated meet these treatment standards and can be land disposed." Brief for Petitioners HWTC and NRDC at 14.⁸ They urge this court to replace the agency's rule with a requirement of their own: "[W]astes, which a generator has determined (by whatever means) to be: 1) hazardous and 2) subject to a land disposal restriction (e.g., they are a listed solvent or dioxin waste), must be tested by the generator if the generator is to certify that the wastes meet treatment standards and can be transported directly to a land disposal facility." HWTC/NRDC Reply Br. at 12 (emphasis in original). This is a requirement we are unwilling to impose.

First, unlike petitioners we find it neither nonsensical nor absurd to expect that generators may to some extent

⁸ As a preliminary matter, we can dismiss HWTC's and NRDC's argument that the rule allowing generators to rely on their knowledge of their waste somehow reflects a technical defect in the rule-making, inasmuch as it "conflicts" with the agency's proffered explanation of its rules. Petitioners point out that the preamble to the final rules states that generators are "responsible for testing and recordkeeping," 51 Fed.Reg. at 40,597, but the rule does not contain any such absolute requirement. However, as was noted at oral argument, the preamble states just a few lines later that generators may make determinations about the hazardous nature of their wastes and the treatment required "based on waste analysis data, knowledge of the waste, or both. Where this determination is based solely on the generator's knowledge of the waste, the Agency is requiring that the generator maintain in the facility operating record all supporting data used to make this certification." *Id.* (emphasis added). Thus, it is clear to us that the preamble does not reflect a fundamental conflict with the rule as adopted, but rather merely states it in a different way.

"know their waste" without testing each batch produced. Indeed, waste generators who apply the same methods to the same inputs in the same manner as part of the same production process every day are, after a while, likely to be in a very good position to know the hazardous contents in their waste. As we read the EPA's rules and statements during the rulemaking process, the agency's scheme does not allow generators to make guesses about the hazardous nature of their wastes without empirical or analytical foundation. Rather, waste generators are allowed to rely on actual "knowledge" they have acquired only if such knowledge enables them to certify that their waste complies with applicable treatment standards. Generators are required to keep records of all data that goes into their certifications, *see* 40 C.F.R. § 268.7(a)(4), and they are subject to penalties for erroneous certifications. Thus, contrary to petitioners' assertion that "nothing in the rule itself . . . requires generators shipping wastes directly to a landfill to test the waste to determine compliance with the treatment standards," Letter from HWTC (March 28, 1989) at 2, the EPA's scheme will necessarily require at least some initial testing of generators' waste stream in order to comply with the rules' plain directives.⁷ If down the road the generators' familiarity with their wastes does indeed render them capable of certifying the wastes' contents without conducting more frequent testing, then we see no reason to compel the EPA to require such unnecessary testing.

Furthermore, we do not find the EPA's decision to require treatment facilities to conduct testing but to allow generators to rely on their knowledge to be "arbitrary." The rulemaking record adequately reflects the EPA's sense that while generators can be expected to have rea-

⁷ Cf. 51 Fed. Reg. at 40,597 ("A waste analysis must be conducted [by the generator of the waste] if there is reason to believe that the composition of the waste has changed or if the treatment process has changed.")

sonable knowledge of familiar wastes, off-site treatment facilities do not always have similar familiarity with the waste they handle. Moreover, it is the treatment facility's job to *transform* waste otherwise deemed too dangerous to permit into landfills into acceptable form. It is therefore not irrational for the EPA to introduce a backup, arguably "redundant" testing stage for these wastes requiring treatment, and even to consider this a "critical" stage in the process. *See* 51 Fed.Reg. at 40,597.

Although the agency's certification system may be somewhat imprecise with regard to generators of waste, this imprecision is not fatal. Rather, the EPA has explicitly stated that the crucial stage in the process, upon which the agency has placed its most heavy reliance, is the point at which the waste reaches the land disposal facility: at this juncture, just prior to land disposal, waste must be rigorously tested to confirm that it is what others have represented it to be and that it may possibly be land disposed. Given the agency's reliance on testing by landfill owners and operators to intercept erroneously identified waste, we cannot say that the EPA acted arbitrarily or capriciously in deciding not to require elaborate and even redundant testing⁸ by generators presumably able to identify in a large number of cases the hazardous components of the waste they generate.

HWTC and NRDC further argue that the testing required of disposal facilities will be inadequate to assure

⁸ Petitioners charge that the EPA's claim that it declined to require generator testing on the ground that it would be redundant was "nothing more than a *post hoc* rationalization of counsel which is not contained in the administrative record." Reply Brief at 10. However, in the proposed regulations the EPA clearly expressed its preference for a scheme under which generator testing would not be absolutely required for the particular reason, *inter alia*, that this approach "does not require redundant testing. . . ." 51 Fed.Reg. at 1692.

that only wastes that are permitted to be land disposed will actually enter landfills.⁹ In particular, they complain that "substantial percentages of individual waste shipments received by a landfill operator are *not* required to be tested for compliance with the treatment standards" by actual testing. Letter from HWTC (March 28, 1989) at 3. Despite these concerns, however, the regulations are structured to assure that the frequency of testing is sufficient to identify wastes that do not comply with treatment standards.

For the purposes of compliance with the land disposal restrictions rule, a waste analysis plan for an off-site disposal facility must address the procedures for screening incoming shipments of waste to ensure that wastes received conform to the certification made by the generator or treatment facility. That is, the waste analysis plan must address the procedures necessary for determining whether an extract of the waste or treated waste meets the treatment standards.

51 Fed. Reg. at 40,598.¹⁰ In a sense, then, petitioners' concerns are premature: while the EPA scheme is de-

⁹ Petitioners apparently concede, contrary to intimations at oral argument, that the substantive tests landfill operators are required to conduct are adequate to identify hazardous components of the waste they receive for disposal. As the agency points out, the regulations require both treatment facilities and landfill operators to use "the test method described in Appendix I of this part," 40 C.F.R. §§ 268.7(b), 268.7(c) (referring to the "Toxicity Characteristic Leaching Procedure")—a test that petitioners have called "extremely stringent." See Brief for Petitioners HWTC and NRDC at 15. The focus of their challenge is apparently limited to the allegedly inadequate *frequency* of testing.

¹⁰ The preamble went on to discuss facilities where generation, treatment and disposal all take place onsite, noting that "[l]ess frequent testing may be appropriate when there are fewer and less variable waste streams at combined facilities, but waste must be tested if the composition or treatment method changes." 51 Fed. Reg. at 40,598. This passage permits an inference that the EPA is

signed to assure adequate testing, which includes case-by-case determinations of the frequency with which actual testing will need to be conducted on waste shipments, petitioners anticipate that the EPA will authorize testing schedules that are inadequate. We prefer to anticipate that the agency will faithfully execute its responsibilities under the statute, and will impose testing requirements that will guarantee that Congress' purposes in enacting the statute are implemented. If the agency does not live up to this expectation, there will be time and opportunity for petitioners' challenge.

At its base, the challenge of HWTC and NRDC is undergirded by a peculiar set of epistemological assumptions. In brief, these petitioners appear to argue that only much more frequent testing of waste at every stage of its handling would ever allow us to "know" whether any given batch of waste (itself an arguably "arbitrary" dividing line) conforms to the EPA's treatment standards. Absent continuous testing at the point of generation, they argue, generators cannot certify what levels of hazardous constituents their waste contains; and if landfill operators are not required to test each individual waste shipment for compliance with the treatment standards by the stringent "Toxicity Characteristic Leaching Procedure" testing method, then the testing requirement at the land disposal stage cannot be relied upon to catch waste that generators have erroneously certified as falling naturally within these standards.

While we have no desire to enter a metaphysical debate over the source and nature of all knowledge, common sense compels recognition of the fact that much of what we think of as "knowledge" in the practical world is nothing more than extrapolation from a more limited set of experiences. As relevant to the present case, we

attuned to the need to require relatively more frequent testing when waste streams coming into a land disposal facility are more numerous and variable.

cannot say that the statute requires testing beyond what is practically necessary to assure with a high degree of confidence that prohibited wastes are not being land disposed. We therefore hold that the EPA's decision to allow generators to rely in appropriate circumstances on their knowledge of their restricted waste to certify that it naturally meets treatment standards is reasonable.

V. CONCLUSION

We conclude that the solvents and dioxins rule is not arbitrary, capricious, or contrary to RCRA in any of the respects argued by petitioners, but remand the matter for the EPA to clarify its reasons for adopting the Final Rule in preference to the Proposed Rule. In order to avoid disrupting EPA's regulatory program, we will withhold issuance of our mandate for 90 days, during which the agency may either withdraw the Final Rule or publish an adequate statement of basis and purpose.

Judgment Accordingly.

SILBERMAN, Circuit Judge, concurring in part and concurring in the result:

I concur in all of the majority's *per curiam* opinion but its purported resolution of the *Chevron* "Step II" question concerning the reasonableness of BDAT treatment standards as a construction or application of RCRA. While CMA's "Step I" challenge to EPA's construction of RCRA section 3004(m)—i.e., whether the statute "clearly forecloses" the approach charted by the agency, Maj. op. 361-62—was available for final judicial review, I do not believe it proper for the court to have reached the Step II question as to whether the selection of BDAT treatment levels was "a reasonable policy choice for the agency to make." *Chevron U.S.A. Inc. v. Natural Res. Defense Council*, 467 U.S. 837, 845, 104 S.Ct. 2778, 2783, 81 L.Ed.2d 694 (1984). In the absence of a valid *agency* explanation as to how it has attempted

to accommodate the competing interests Congress has committed to its care via RCRA, it is in my view inappropriate (perhaps analytically impossible) even to address, much less resolve, CMA's challenge to the reasonableness of EPA's treatment regime under the statute. Because the court today remands for further EPA explanation of its adoption of BDAT standards, the majority's *Chevron* Step II discussion should be considered *dictio*.

I agree with the majority's conclusion that Congress did not have a "specific intention" that technology-based treatment standards not be employed in implementation of section 3004(m), *see Chevron*, 467 U.S. at 845, 104 S.Ct. at 2783, and to that extent I further agree that the questions of statutory interpretation presented by CMA's petition are appropriately resolved under Step II of *Chevron*. My reading of the critical statutory language requiring EPA to set treatment standards so that "threats to human health and the environment are minimized" suggests a threshold ambiguity as to whether Congress intended the agency, insofar as it was technologically possible, to eliminate any statistically discernible risk to human health and the environment, or whether Congress intended there to be some sort of balancing. The dictionary definition of the word "minimize," *see Maj. op. at 361*, provides no ready answer to this question; a command that the agency "reduce" a threat "to the smallest *possible* degree" leaves open the factors that the agency can account for in determining what is, in fact, possible (or feasible?) under the circumstances.

We are also in agreement over the significance that EPA must attach to actual or reasonably perceived "threats to human health and the environment" in the course of fleshing out section 3004(m)'s meaning. As the majority notes, EPA is not

free . . . to require generators to treat their waste beyond the point at which there is no 'threat' to human health or the environment. That Congress's concern in adopting § 3004(m) was with health and the environment would necessarily make it unreasonable for EPA to promulgate treatment standards wholly without regard to whether there might be a threat to man or nature.

Maj. op. at 362. EPA is instead obliged to explain how its selection of BDAT treatment standards—which, as CMA notes, will require generators to treat certain wastes to levels of purity *beyond* those EPA requires for drinking water—is guided by RCRA's concern with health and environmental threats. But the majority persuasively demonstrates that EPA's explanation in the Final Rule falls woefully shy of this mark as a matter of administrative law, leaving the court without any hint whatsoever as to EPA's theory of the compatibility of the Final Rule with RCRA's purposes. Under these circumstances, resolution of the statutory questions confronting the court, at least those belonging to Step II of *Chevron*, is an improper exercise of judicial creativity.

In order to conclude—as the majority does—that the accommodation of competing RCRA policies reflected in the agency's treatment regulation is "one that Congress would have sanctioned," *United States v. Shimer*, 367 U.S. 374, 383, 81 S.Ct. 1554, 1560, 6 L.Ed.2d 908 (1961) (quoted in *Chevron*, 467 U.S. at 845, 104 S.Ct. at 2783), the court necessarily must determine that the approach is "rational and consistent with the statute." *NLRB v. United Food & Comm'l Workers U.*, 484 U.S. 112, 108 S.Ct. 413, 421, 98 L.Ed.2d 429 (1987). This requires a determination that the agency has fashioned its approach in reliance on considerations made relevant by Congress under the substantive statute, which in turn requires an examination of the agency's stated reasons for adopting the challenged course. See, e.g., *AFL-CIO*

v. Brock, 835 F.2d 912, 917 (D.C.Cir.1987) (equating *Chevron's* second step with arbitrary and capricious review of agency policies); *NRDC v. EPA*, 824 F.2d 1146, 1163 (D.C.Cir.1987) (striking down agency statutory interpretation based on unreasonable "application of [relevant statutory] factors"); see also *Chevron*, 467 U.S. at 843, 104 S.Ct. at 2782 (requiring affirmance of administrative statutory construction if interpretation is a "reasonable policy choice for the agency to make"). The critical inquiry, as such, in the court's *Chevron* Step II inquiry is "whether the *agency* has advanced what the *Chevron* Court called 'a reasonable explanation for its conclusion that the regulations serve the . . . objectives in question.'" *Continental Air Lines v. Dep't of Transp.*, 843 F.2d 1444, 1452 (D.C.Cir.1988) (quoting *Chevron*, 467 U.S. at 863, 104 S.Ct. at 2791) (emphasis added).

EPA's explanation in the instant case, however, is utterly devoid of any rationale whatsoever for the agency's statutory construction or its policy choice. As the court observes, EPA's intentions in promulgating treatment standard are "so shrouded in mist that for this court to say that we could discern its outlines would be as illogical as the agency's explanation in the Final Rule itself." Maj. op. at 366. I would go further: I think it doubtful that EPA attempted at all to explain its presumptive view that the employment of BDAT treatment standards *across the board* would reasonably serve congressional intent. For after observing in the Final Rule that the plain language and legislative history of RCRA do not squarely preclude a technology-based approach, EPA failed to indicate what statutory policies tipped the balance in favor of that approach as opposed to the initial health-screening levels announced in the Proposed Rule. Before the court can determine that "the agency's answer is based on a permissible construction of the statute," *Chevron*, 467 U.S. at 843, 104 S.Ct. at 2782, the agency must explain how it has translated RCRA into its treatment standards regulation.

The majority's *Chevron* Step II analysis itself convincingly illustrates how important a role the agency's explanation of its policy accommodation plays in post-*Chevron* federal judicial review of agency statutory interpretation. Nowhere in its discussion does the majority address the *agency's* view of the way in which the BDAT regime serves RCRA's purposes; because the agency offered no such view, this should not be surprising. This part of the majority's opinion is instead devoted exclusively to the *petitioner's* objection that, with respect to certain solvents and dioxins, BDAT treatment levels will result in treatment to "below established levels of hazard." See Maj. op. at 362. The majority responds to CMA's argument by pointing out that none of the "established levels" to which CMA refers was developed under a statutory standard requiring minimization of "threats to human health and the environment." But *EPA* did not say that. We have before us no indication, as the majority later observes, that *EPA* was driven away from "established" health-screening levels on the basis of the asserted incomparability of the statutory standards under which those levels were determined. Nor, as the majority later notes as well, see Maj. op. at 365-66, is there any indication that *EPA* was impelled toward technology-based levels because of the "long-term uncertainties associated with land disposal" Congress identified in RCRA. 42 U.S.C. § 6924(d)(1)(A). The majority's treatment of CMA's—as opposed to *EPA*'s—analysis at best suggests that CMA's approach is not compelled by the legislative text, a proposition relevant only to *Chevron's* first step.

Indeed, the majority's discussion of the reasonableness of *EPA*'s interpretation of the statute necessarily proceeds without reference to an *agency* interpretation because no such construction exists.¹ One is left to wonder

¹ The majority asserts, Maj. op. at 363 that the *EPA*, and not the court, provided the basis for the interpretation found reasonable

how the majority can give deference to a statutory construction (or an explanation as to how an agency initiative is consistent with the statute) that nowhere appears in the Final Rule. The majority's *Chevron* Step II analysis, in my opinion, is nothing more than an advisory opinion to the effect that *were* the court presented with a Final Rule that echoed the majority's discussion of an appropriate balance to strike among RCRA's purposes, the court would sustain the agency's view of the statute. As a consequence, the majority ends up deferring not to an agency statutory construction, but rather simply to a result. Assuming this judicial approach ever were permissible, surely after *Chevron* it no longer is.

Given the complexity of the subject matter and the fundamental ambiguity in Congress' direction, a complete agency explication of its view of the statute would be especially helpful in this case. For instance, the question of how (and why) Congress would have intended EPA to require generators to treat the wastewaters they intend to pour *into* the ground to levels more pure than Congress requires for drinking water drawn *out of* the ground would surely benefit from the views of those to whom Congress entrusted regulatory responsibility. More fundamentally, it is incumbent upon EPA to identify the incremental "threats to human health and the environment" that it hopes to address by opting uniformly for more stringent technology-based standards in lieu of health-based standards of whatever origin. Cf. *Small Refined Lead Phase-Down Task Force v. EPA*, 705 F.2d

here. But the "catalog of uncertainties" the majority refers to are all found in the discussion accompanying the Proposed Rule, in the Initial Rule document, and in briefs to this court—not in the Final Rule and accompanying explanation. Of course, only the agency's explanation of its ultimate choice, not its prior musings nor, ordinarily, its post hoc explanations in court, see *FLRA v. United States Dep't of the Treasury*, 884 F.2d 1446 (D.C.Cir.1989); *Women Involved in Farm Economics v. United States Dep't of Agriculture*, 876 F.2d 994, 998-1000 (D.C.Cir.1989), are proper subjects of judicial review.

506, 523 (D.C.Cir. 1983) ("adverse health effects," in and of themselves, do not permit EPA "to justify any . . . standard at all, without explaining why it chose the level it did"); *United Steelworkers of America v. Marshall*, 647 F.2d 1189, 1207 (D.C.Cir.1980) (agency must "explain the logic and the policies underlying any legislative choice"), *cert. denied*, 453 U.S. 913, 101 S.Ct. 3148, 69 L.Ed.2d 997 (1981); *Lead Indus. Ass'n v. EPA*, 647 F.2d 1130, 1162 (D.C.Cir.) (choice between two policy approaches must be explained), *cert. denied*, 449 U.S. 1042, 101 S.Ct. 621, 66 L.Ed.2d 503 (1980); *Industrial U. Dep't, AFL-CIO v. Hodgson*, 499 F.2d 467, 476 (D.C. Cir.1974) ("when [an administrator] is obliged to make policy judgments . . . , he should so state and go on to identify the considerations he found persuasive"). Only then can the court legitimately defer to the agency's construction of RCRA, for proper judicial deference to an agency interpretation requires an understanding of the agency's objectives that can only be gleaned from the agency's presentation of its rule. With all respect, the majority's analysis, however appealing, *see* Maj. op. at 362-64, cannot substitute for this obligatory agency explanation.

I do not mean to ignore the conceptual distinction between review of an agency's statutory construction and of an agency's actions under the arbitrary and capricious standard. We have in the past said "[i]t would be inappropriate . . . to import wholesale [arbitrary and capricious review principles] and apply [them] in [the] conceptually distinct arena" of statutory construction. *Continental Air Lines, Inc. v. Dep't of Transp.*, 843 F.2d 1444, 1452 (D.C.Cir.1988). But at the same time we have often recognized that *Chevron's* second step and review of an agency's action under the arbitrary and capricious standard, although starting from different legal premises, often converge and sometimes overlap. *See, e.g., General Am. Transp. Corp. v. ICC*, 872 F.2d 1048, 1053 (D.C.Cir.1989); *AFL-CIO v. Brock*, 835 F.2d

at 917; *Natural Res. Defense Council v. EPA*, 824 F.2d at 1163; *Rettig v. Pension Benefit Guaranty Corp.*, 744 F.2d 133, 152 (D.C.Cir.1984). One thing, in any event, is quite clear: these "distinct" judicial review functions proceed from a common foundation—the agency's expressed view. Thus, if the agency has offered an inadequate explanation as to how its chosen policy is consistent with Congress' mandate, the court's *Chevron* Step II analysis is necessarily hypothetical.

It would appear that EPA faced with formidable political forces opposing its Proposed Rule, simply acquiesced in the approach desired by those forces, but was unwilling to offer as its own a statutory/policy rationale to justify its acquiescence. In the Final Rule, EPA in effect stated that it recognized, and subordinated itself to, the senators and congressmen who protested against EPA's Proposed Rule without in any way affirming the legal (or policy) superiority of the legislators' position. My colleagues acknowledge EPA's behavior is intolerable as a matter of administrative law, see *Meredith Corp. v. FCC*, 809 F.2d 863, 872-73 (D.C.Cir.1987) (holding that FCC was obliged to address constitutional challenge to fairness doctrine notwithstanding "non-legislative expressions of congressional concern" that the question be reserved for Congress); *Sierra Club v. Costle*, 657 F.2d 298, 404-10 (D.C.Cir.1981) (holding that EPA's *ex parte* exchanges with congressional leaders and White House officials did not render informal rule procedurally infirm since EPA set forth its own independent rationale for the rule selected), but nevertheless "rescue" EPA from its predicament by supplying the statutory/policy analysis which, if it had been adopted by EPA, would have obviated the need for a remand. Under the circumstances, I do not know why the court's remand is other than an empty gesture, one which conforms to principles of judicial review of agency policymaking only in form.

APPENDIX B

**UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

No. 86-1657

HAZARDOUS WASTE TREATMENT COUNCIL,
Petitioner

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Respondent

and Consolidated Cases

Petitions for Review of a Rule of the
Environmental Protection Agency

Before: Wald, Chief Judge; Silberman and D. H. Ginsburg, Circuit Judges

JUDGMENT

[Filed Mar. 14, 1990]

Upon consideration of this Court's opinion of September 15, 1989, of respondent's Notice of Compliance With Court's September 15, 1989 Decision as Modified and of the statement attached thereto, filed February 12, 1990, it is

ORDERED, by the Court, that the petitions for review herein are dismissed, and it is

FURTHER ORDERED, by the Court, that costs in the amount of \$741.00 are awarded to respondent and taxed against petitioners, and it is

FURTHER ORDERED, by the Court, that the Clerk is directed to issue of certified copy of this order to respondent, in lieu of a formal mandate.

Per Curiam

FOR THE COURT:

CONSTANCE L. DUPRE,
Clerk

By: /s/ Robert A. Bonner
ROBERT A. BONNER
Deputy Clerk

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 86-1657

HAZARDOUS WASTE TREATMENT COUNCIL,
Petitioner

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Respondent

and Consolidated Cases

Before: Wald, Chief Judge, Silberman and D. H. Ginsburg, Circuit Judges

ORDER

[Filed Mar. 14, 1990]

It is ordered, by the Court, *sua sponte*, that the mandate of the Court inadvertently issued on March 5, 1990, be, and the same hereby is, recalled.

Per Curiam

FOR THE COURT:

CONSTANCE L. DUPRE,
Clerk

By: /s/ Robert A. Bonner
ROBERT A. BONNER
Deputy Clerk

APPENDIX C

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260, 261, 262, 264, 265, 268, 270, and 271

[SWH-FRL 3089-5]

Hazardous Waste Management System; Land Disposal Restrictions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency is today promulgating its approach to implementing the congressionally mandated prohibitions on the land disposal of hazardous waste. This action is responsive to amendments to the Resource Conservation and Recovery Act (RCRA), enacted through the Hazardous and Solid Waste Amendments of 1984 (HSWA).

Today's notice establishes procedures for setting treatment standards for hazardous wastes, for granting nationwide variances from statutory effective dates, for granting extensions of effective dates on a case-by-case basis, for evaluating petitions for a variance from the treatment standard, and for evaluating petitions demonstrating that continued land disposal of hazardous wastes is protective of human health and the environment.

In addition, EPA is promulgating specific treatment standards and effective dates for hazardous wastes included in the first phase of the land disposal prohibitions; certain dioxin and solvent-containing hazardous wastes. EPA also is promulgating the Toxicity Characteristic Leaching Procedure (TCLP) for use in determining whether these wastes meet the applicable treatment

standards. Extensions of the effective date for certain categories of these wastes are also promulgated in today's rule.

Prohibitions on underground injection of these wastes are on a different schedule and are being addressed in a different rulemaking. The treatment standards, however, will apply when the restrictions are effective.

DATE: This final rule is effective November 8, 1986, except for the provisions in §§ 268.30(b) and 268.31(a), which will become effective on November 8, 1988.

* * * *

C. *Section 3004(m) Treatment Standards*

As discussed earlier, the Agency proposed two major approaches to setting treatment standards under section 3004(m). The first approach involved development of treatment standards based on either technology- or risk-based screening levels. The second approach was based entirely on technology-based standards expressed as BDAT. The Agency is promulgating the second approach as the framework under which disposal of solvents, dioxins, and the scheduled wastes will be evaluated.

The risk-based methodology proposed by the Agency considered the degree of hazard posed by wastes land disposed in Subtitle C facilities. This led to the development of "maximum acceptable contaminant concentrations" (or screening levels), which were based on the recognition that the potential for harm to human health and the environment will differ depending on the toxicity, mobility, and persistence of the waste stream. This approach also recognized that, in some cases, any single technology-based level may provide more protection than is necessary, while in other cases, may provide insufficient safeguards for human health and the environment. Moreover, under the proposed approach, relatively "low hazard" wastes could be considered suitable for land disposal without any treatment at all.

Although a number of comments on the proposed rule favored the first approach; that is, the use of screening levels to "cap" treatment that can be achieved under BDAT, several commenters, including eleven members of Congress, argued strongly that this approach did not fulfill the intent of the law. They asserted that because of the scientific uncertainty inherent in risk-based decisions, Congress expressly directed the Agency to set treatment standards based on the capabilities of existing technology.

The Agency believes that the technology-based approach adopted in today's final rule, although not the only approach allowable under the law, best responds to the above-stated comments. Accordingly, the final rule establishes treatment standards under RCRA section 3004(m) based exclusively on levels achievable by BDAT. The Agency believes that the treatment standards will generally be protective of human health and the environment. Levels less stringent than BDAT may also be protective.

The plain language of the statute does not compel the Agency to set treatment standards based exclusively on the capabilities of existing technology. RCRA section 3004(m) requires EPA to "promulgate regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized" (42 U.S.C. 6924(m)). By calling for standards that minimize threats to human health and the environment, the statute clearly allows for the kind of risk-based standard originally proposed by the Agency. However, the plain language of the statute does not preclude a technology-based approach. This is made clear by the legislative history accompanying the introduction of the final section 3004(m) language. The legislative his-

tory provides that “[T]he requisite levels of [sic] methods of treatment established by the Agency should be the best that has been demonstrated to be achievable” and that “[T]he intent here is to require utilization of available technology in lieu of continued land disposal without prior treatment” (Vol. 130, *Cong. Rec.* 9178, (daily ed., July 25, 1984)). Thus, EPA is acting within the authority vested by the statute in selecting to promulgate a final regulation using its proposed alternative approach of setting treatment standards based on BDAT.

The Agency believes that its major purpose in adopting the risk-based approach of the proposal (i.e., to allow different standards for relatively low-risk, low-hazard wastes) may be better addressed through changes in other aspects of its regulatory program. For example, EPA is considering the use of its risk-based methodologies to characterize wastes as hazardous pursuant to section 3001.

* * * *

APPENDIX D**ENVIRONMENTAL PROTECTION AGENCY**

40 CFR Parts 260, 261, 262, 264, 265, 268, 270 and 271

[SWH-FRL 2927-3]

**Hazardous Waste Management System:
Land Disposal Restrictions**

AGENCY: Environmental Protection Agency [EPA].

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency is today proposing a framework for a regulatory program to implement the congressionally mandated land disposal prohibitions. These actions are responsive to amendments to the Resource Conservation and Recovery Act (RCRA), enacted through the Hazardous and Solid Waste Amendments of 1984 (HSWAs) on November 8, 1984.

This action proposes procedures to establish treatment standards for hazardous wastes, to grant nationwide variances from statutory effective dates, to grant extensions of effective dates on a case-by-case basis, and procedures by which EPA will evaluate petitions demonstrating that continued land disposal is protective of human health and the environment.

In addition, EPA is proposing treatment standards and effective dates for the first classes of hazardous wastes to be evaluated under this framework: Certain dioxin-containing hazardous waste and solvent-containing hazardous waste.

This proposal establishes the framework under which all hazardous wastes will be evaluated in accordance with

the schedule (when issued as a final rule) that was proposed, as published in the Federal Register of May 31, 1985 (50 FR 23250) and prohibits land disposal of certain dioxin- or solvent-containing wastes unless the treatment standards are achieved. The framework and treatment standards being proposed today do not apply to the disposal of hazardous wastes in underground injection wells.

DATES: Comments on this proposed rule should be submitted on or before March 17, 1986.

* * * *

II. Summary of Today's Proposal

EPA today is proposing and requesting public comment on a framework for a regulatory program to implement the land disposal prohibitions mandated by Congress under section 3004 (d), (e), and (g). EPA is also proposing the section 3004(m) treatment standard and associated effective dates for two classes of hazardous wastes: Solvent wastes and dioxin-containing wastes addressed by section 3004(e). (Unless otherwise specifically noted or contextually obvious, "treatment standards" in this preamble refers to RCRA section 3004 (m) standards.) EPA used the decision-making framework described in today's proposal to develop these initial sets of proposed treatment standards and associated effective dates. The Agency hopes that its simultaneous proposal of the land disposal restrictions program framework and the initial treatment standards derived therefrom will assist the public in understanding the program's mechanics and its environmental and economic impacts, and serve to focus public comment. It may be desirable in the final rule, however, to separate the decision-making framework from the standards for solvent- and dioxin-containing wastes and issue them as two separate rulemakings.

This unit of the preamble provides a brief summary of the major program components and describes how they are integrated into a regulatory framework. Unit

III, following, describes individually, and in greater detail, the development and implementation of each of these components, including descriptions of the various models used by EPA in implementing the program. Detailed mathematical descriptions of these models are provided in this preamble and in background documents available for public examination in the RCRA docket (see ADDRESSES). The proposed treatment standards and associated effective dates derived from this regulatory framework for the initial two classes of hazardous wastes are then presented in Units V and VI.

A. Statutory Prohibitions on Land Disposal and Section 3004(m) Treatment Standards

Section 3004 (d), (e), and (g) automatically prohibits continued land disposal of all listed hazardous wastes beyond specified dates. Each of these subsections, however, provides exceptions to the prohibitions for wastes and treatment residuals that comply with standards to be promulgated by EPA under section 3004(m). Section 3004(m) requires EPA to "promulgate regulations specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste, or substantially reduce the likelihood of migration of hazardous constituents from the waste so that long-term and short-term threats to human health and the environment are minimized."

In addition to providing exceptions for wastes that comply with the treatment standards, section 3004 (d), (e), and (g) also allows the Administrator to determine that the statutory prohibition on one or more methods of land disposal is "not required in order to protect human health and the environment for as long as the waste remains hazardous." However, the Administrator is precluded from determining that a method of land disposal is protective "unless, upon application by an interested person, it has been demonstrated to the Administrator, to a reasonable degree of certainty, that there will be no

migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous."

Accordingly, EPA has two primary responsibilities under this statutory scheme:

1. To promulgate exceptions to the statutory prohibitions, in the form of treatment standards ensuring that the long-term and short-term threats to human health and the environment arising from continued land disposal are minimized.
2. To grant exemptions from the statutory prohibitions, through approval of petitions successfully demonstrating that continued land disposal of specific hazardous wastes is protective of human health and the environment.

The Agency also is responsible for establishing variances from and extensions to the statutory effective dates for the land disposal prohibitions, as well as for the implementation of statutory prohibitions on the storage of wastes that are prohibited from land disposal.

Before presenting and describing the entire regulatory and decision-making framework being proposed today, it is necessary to discuss in greater detail one of its central aspects: the establishment of treatment standards. As the following discussion explains, EPA will determine both technology-based levels and screening levels as intermediate steps in establishing a section 3004(m) treatment standard.

The objective of the treatment standards is to minimize the threats to ground water (due to leaching), air (due to emissions), and surface waters (due to leaching) associated with land disposal of hazardous wastes by substantially reducing the toxicity and/or mobility of such wastes prior to placement in land disposal units. The statute specifies that such standards may take the form

of prescribed levels or methods of treatment. Treatment standards therefore, may take the form of performance standards governing the nature or quality of wastes or treatment residuals that may be placed in land disposal units. Such performance standards may be expressed as maximum acceptable concentration levels for individual chemical constituents in extracts from wastes (e.g., maximum leachate concentrations), or in the wastes themselves (e.g., maximum waste concentrations). The statute indicates that treatment standard also may take the form of specified treatment methods or treatment chains that must be applied to wastes prior to placement in land disposal units (e.g., incineration of organics; stabilization of metals; precipitation of metals from waste water streams, followed by fixation of precipitate sludges, etc.). The Agency prefers, however, to express treatment standards as performance standards wherever possible because such standards provide greater flexibility to the regulated community in developing and implementing compliance strategies.

Section 3004(m) specifies that treatment standards must "minimize" long- and short-term threats to human health and the environment arising from land disposal of hazardous wastes.

Congress indicated in the legislative history accompanying the HSWAs that "[t]he requisite levels of [sic] methods of treatment established by the Agency should be the best that has been demonstrated to be achievable", noting that the intent is "to require utilization of available technology" and not a "BAT-type process which contemplates technology-forcing standards." (Vol. 130 Cong. Rec. S9178 (daily ed., July 25, 1984).) EPA interprets this legislative history to suggest that Congress considered the "minimize" standards to be met by application of this best demonstrated achievable (or available) technology (BDAT) prior to placement of wastes or treatment residuals into land disposal units. In devel-

oping technology-based levels, treatment processes are evaluated based upon the performance of their residuals in the land disposal environment.

Congress acknowledged that current technologies may be incapable of completely eliminating threats arising from the land disposal of certain types of hazardous wastes. The legislative history notes, for example, that "for certain wastes, such as metals and inorganics, there are no practical treatment technologies at this time that permanently eliminate their toxicity." The legislative history specifically suggests that state-of-the-art stabilization techniques would meet the section 3004(m) "minimization" requirements for such wastes, even though such techniques are acknowledged to be less than completely effective in reducing long-term mobility of hazardous constituents.

However, the Agency does not believe that Congress intended all state-of-the-art technology to be deemed appropriate treatment, regardless of its level of performance. In noting that the Administrator shall specify "those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste," Congress clearly implies that a minimum performance standard, in the form of "substantial" reductions in toxicity and/or mobility, must be achieved under the section 3004(m) treatment standards.

EPA is concerned that some treatment technologies, when applied to particular waste streams, may result in significant releases of hazardous constituents to the environment in the process of achieving "substantial" reductions in the waste's toxicity or mobility prior to land disposal. Depending upon their nature and magnitude, the total risks associated with these releases may in fact be greater than the risks associated with land disposal of the waste. Therefore, to ensure that total human

health and environmental risks are not increased as a result of EPA's implementation of the statutory land disposal prohibitions, the Agency will conduct risk assessments to compare the risks of managing wastes in land disposal units with the risks of managing wastes in alternative treatment technologies, including any subsequent land disposal of treatment residuals. Treatment technologies that are found through these comparative risk assessments to pose greater total risks than those posed by direct land disposal of the waste will be classified as "unavailable" for purposes of establishing the section 3004(m) treatment standard for that waste.

These comparative risk assessments, described in greater detail in Unit III.C, are not explicitly required under RCRA. The Agency believes, however, that Congress did not intend risks to human health and the environment to be increased in prohibiting the continued land disposal of hazardous wastes. EPA believes that it is desirable, reasonable, and consistent with the intent of Congress to include comparative risk assessments to classify as "unavailable" for purposes of establishing treatment standards those waste/treatment technology combinations that pose greater total risks to human health and the environment than those posed by direct land disposal of the waste. However, the statute does not allow a determination that one or more alternative treatment technologies pose greater risks than land disposal of the waste should not be used as a basis for allowing continued land disposal of the waste. Rather, when these comparative risk assessments identify specific, unacceptable risks for an alternate treatment technology or treatment train, EPA will endeavor to reduce these risks through development and promulgation of additional standards (e.g., air emissions controls). Unfortunately, these additional standards may not be developed by the time the restrictions take effect, thus, requiring that technologies posing risks greater than land disposal be considered "unavailable" for purposes of es-

tablishing BDAT Levels. As a result, the universe of candidate technologies for BDAT may be more limited. In addition, since technologies ruled out because of risk may be more efficient than other candidate technologies, the remaining technologies on which the BDAT treatment standard is based may allow greater concentrations of hazardous constituents in the residuals going to land disposal.

The Agency may also prohibit the use of technologies found to be riskier than land disposal. However, these prohibitions may not be effective prior to the effective date of ban restrictions. In cases where additional standards or prohibitions for riskier technologies are not promulgated prior to a restriction effective date, such technologies may be used to meet concentration levels set under section 3004(m) even though these technologies did not form the bases for selecting such levels. In an effort to avoid this result, EPA will attempt to regulate riskier technologies prior to the ban effective date whenever possible.

In addition to developing technology-based levels, EPA will invoke the authority of section 3004(m) to establish screening levels. A screening level will be developed for each individual hazardous constituent and will identify the maximum concentration below which the Agency believes there is no regulatory concern for the land disposal program and which is protective of human health and the environment. The methodology used in establishing these levels is described in detail in Unit III. These screening levels will serve three major functions.

First, the screening level, or concentration level, will be used to avoid "excessive" treatment. In some cases, available technologies may be capable of achieving greater reductions in toxicity and/or constituent mobility than are actually necessary to provide protection of human health and the environment in subsequent land disposal of hazardous wastes. The Agency does not be-

lieve that Congress intended that EPA promulgate standards requiring treatment for treatment's sake (i.e., requiring more treatment than necessary to protect human health and the environment). Accordingly, in order to avoid setting treatment standards that require excessive treatment prior to land disposal, EPA in some cases will employ the screening levels thresholds to "cap" the reductions in toxicity and/or mobility that otherwise would result from the application of BDAT treatment, even though the efficiencies of available technologies may be capable of achieving more stringent levels (i.e., the levels will provide an upper limit on the stringency of the treatment standard). In the situation described above, the screening level would become the regulatory treatment standard since there would be no need, from environmental or human health perspectives, to set a more stringent standard.

Second, in some cases, while the application of BDAT will result in substantial reductions in toxicity and mobility, available technologies may not be able to achieve concentration levels that provide full protection of human health (i.e., the screening levels). Although the statute specifies that compliance with technology-based standards is legally sufficient in such a situation, the Agency believes that the screening levels should function as a goal for future changes to the treatment standards as new and more efficient treatment technologies become available. In this second situation, the screening levels identify constituent concentrations that are desired in land disposal in the long term, but which are not actually required in the short term due to limitations in technological capacities.

Finally, in certain circumstances, EPA may conclude that no candidate treatment technologies provide the "substantial" reductions in toxicity or mobility required under section 3004(m); or, that all candidate treatment technologies pose greater total risks than land disposal.

Accordingly, the Agency would determine that there are no treatment technologies "available" upon which to base the treatment standard, because even the best demonstrated treatment technologies do not provide sufficient safeguards against the threats posed by land disposal or because application of treatment technologies would increase overall risks to human health and the environment. In such cases, the screening level will become the treatment standard, providing at least for land disposal of wastes containing constituents at concentrations determined to be protective of human health and the environment.

The development and use of these screening levels is not required explicitly under any of the amendments to section 3004 enacted through the HSWAs. EPA believes, however, that the development and application of such standards is reasonable and desirable from both environmental and economic perspectives. Economically, inclusion of these protective caps ensures that limited resources (natural resources as well as financial resources) are not expended needlessly in meeting treatment standards in excess of what is required to protect human health and the environment in the land disposal of hazardous wastes. In addition, since the screening level standard functions effectively as an alternative to the petition process (i.e., constituents that meet the screening levels naturally are exempted from treatment without going through the petition process) the Agency expects to realize internal savings by minimizing the costly and administratively burdensome petition review process. From an environmental perspective, EPA's efforts in developing the screening levels will identify those situations where even BDAT treatment cannot achieve protection of human health and the environment, and will provide goals in such cases for future technology development. Finally, EPA believes it is desirable to employ the screening levels as the treatment standards in cases where no treatment standard would otherwise be estab-

lished (e.g., in cases where all treatment technologies are riskier than land disposal or when even the best demonstrated treatment technology does not provide substantial reductions in toxicity or mobility). If no treatment standard is promulgated for a waste, the waste and all residuals from treatment of the waste are completely prohibited from land disposal (unless, of course, EPA approves petitions for continued land disposal or applications for effective date extensions). By employing the levels as treatment standards in such cases, EPA avoids forcing all those seeking continued land disposal to submit petitions. Instead, those forms of waste (e.g., contaminated soils resulting from spills or cleanup actions under CERCLA; waste waters containing small concentrations of hazardous constituents; etc.) that meet the screening level constituent concentration levels may continue to be disposed of in or on the land because such disposal will not harm human health or the environment.

The relationship of the technology-based standards and the screening levels can be summarized briefly as follows. If application of BDAT treatment results in concentration levels equal to or more stringent than the screening levels, then the Agency will issue the screening level as the treatment standard, capping off required BDAT treatment at these protection levels. If application of BDAT treatment results in levels that are less stringent than the screening level, but BDAT does realize substantial reductions in toxicity or mobility and does not pose greater risks than land disposal, then the technology-based level becomes the treatment standard and the screening level remains as a goal that may be reached as new technologies emerge. If no technologies exist that result in substantial reductions in toxicity or mobility or if all treatment technologies pose greater risks than land disposal, then EPA will not be able to specify a technology-based level and the screening level becomes the treatment standard.

It is important to note that any waste naturally meeting the treatment levels (i.e., without actually undergoing treatment) would be, under the proposed approach, exempted from the ban. There would appear to be little rationale for allowing a waste treated to those levels to be exempted from the ban, while not exempting a waste that naturally contains acceptable levels so that treatment is not required to comply with the standard. Moreover, the language of section 3004(m) appears to support this conclusion. Section 3004(m) directs EPA to specify "those levels or methods of treatment, if any," required to substantially diminish toxicity or reduce mobility. The "if any" clause indicates that EPA may identify cases where no treatment is required to meet the standard; i.e., cases in which the standard can be met without application of technology. Accordingly, EPA is proposing to exempt from the land disposal prohibitions any waste treated to meet the applicable section 3004(m) standard, or meeting such standard without treatment.

In summary, in setting the effective concentration limits that govern the quality of land disposed wastes, the Agency will consider a set of relevant factors. The screening level is based on individual risk—the first factor. The strength of evidence for carcinogenicity is part of the individual risk assessment (see Unit III. A. l. e). The performance of treatment technologies, alone and in relation to the screening levels has major influence on the chosen effective concentration limits. For example, when a treatment substantially reduces the concentration of a constituent in a waste, but does not attain the screening level the treatment performance will become the effective control level. Population risk will be added as a factor if the Agency can develop a method of using available population data. A possible approach is described in unit III. A. l. i.

The Agency believes that the development of nationally applicable screening levels best implements its stated ob-

jectives of capping off necessary treatment, providing a goal for the development of emerging technologies and future treatment standards, and providing a concentration-based standard under section 3004(m) in cases where a technology-based treatment level is not developed. In general, however, the same objectives could be realized in the absence of national screening levels. Accordingly, EPA may consider two alternative approaches.

The first alternative does not provide for the development of screening levels but instead relies entirely on technology-based treatment section standards and the petition process. Under a regulatory framework that provided only for the development of technology-based (BDAT) treatment standards (as opposed to screening levels and technology-based standards), the petition process could serve to "cap off" the required level of treatment so as to avoid treatment for treatment's sake. Under this approach, if a prescribed level or method of treatment under section 3004(m) resulted in concentration levels that an owner/operator believed to be overly protective, the owner/operator could petition the Agency to allow the use of an alternative treatment level or method or no treatment at all by demonstrating that less treatment would still meet the petition standard of protecting human health and the environment.

A second major function of the national screening level is to provide a section 3004(m) standard in cases where EPA is unable to develop a technology-based standard because BDAT has not been identified. As noted earlier, the benefit of this approach is that instead of banning a waste outright because there is no technology available to treat to acceptable levels, a waste may still be land disposed if it can meet the protective screening level naturally. However, this same function could be fulfilled by the petition process. Under the above scenario, if EPA fails to issue a treatment standard under section 3004(m), an owner/operator could still petition the

Agency under § 268.5 to allow continued land disposal of the waste upon a demonstration that land disposal of the waste would not result in harm to human health and the environment.

There is no need to develop regulatory screening levels to meet the last major function of such nationally applicable levels i.e., the development of hazardous constituent concentration goals towards which emerging technologies can strive. This goal could be met by the development of screening levels in a non-regulatory context.

The major drawback of this first alternative however, is that it would increase the number of petitions received by the Agency. Pending determinations on individual petitions, wastes will be restricted from land disposal.

The Agency is also considering a second alternative to the approach outlined today. As noted in earlier discussions, EPA believes that it has authority under section 3004(m) to give screening levels regulatory effect in two situations. First, in cases where technology is capable of meeting or exceeding the screening level this protective concentration level becomes the regulatory standard under section 3004(m), effectively "capping off" the application of technology to avoid treatment in excess of that needed to protect human health and the environment. Second, the screening level also will have regulatory effect in cases where all candidate technologies are riskier than land disposal or where EPA is unable to identify a technology that substantially reduces the toxicity and diminishes the mobility of a constituent. In such cases, the screening level essentially becomes the section 3004(m) standard by default, i.e., because no acceptable technology has been identified upon which to base a treatment standard.

This second alternative approach would base the treatment standards established under section 3004(m) only

on levels capable of being achieved by the application of BDAT technology. Under such an approach EPA would continue to use screening levels to cap off the use of technology, but would not establish the screening level as the treatment standard when no acceptable technology has been identified. If EPA were unable to identify a technology that substantially reduces the toxicity and mobility of hazardous constituents or if all technologies are riskier than land disposal, then the Agency would not set a section 3004(m) standard. In such a case, a waste banned from land disposal could be disposed of in land only if it is the subject of a successful petition demonstration under section 3004 (d), (e), or (g).

The petition demonstration requires a showing that the hazardous constituents in a waste will not migrate to a point of potential human or environmental exposure in concentrations that will harm human health or the environment (see Unit III.G). As discussed in Unit III.A, the screening model will identify a maximum protective concentration level for each hazardous constituent. Accordingly, under this approach if a petitioner could show that all of the hazardous constituents in his waste are at concentrations equal to or less than the concentration established by the screening model, EPA may determine that land disposal of such a waste is protective. With this approach, the Agency could develop a simplified petition process to address such cases. The simplified petition would consist of a petitioner's certification, with supporting analytical data, that all hazardous constituents in the waste meet applicable screening levels.

EPA solicits public comment on its approach to developing treatment standards. The Agency is particularly interested in the public's views on the desirability of developing screening levels in addition to technology-based standards. In addition, EPA would welcome information indicating which wastes (and what physical

states and what quantities) could be expected to meet the screening levels proposed today without treatment. To what extent does the regulated community believe that it will rely on compliance with screening levels to exclude waste from the restrictions in lieu of petitioning for an exclusion? (screening levels for certain solvents are identified in unit V.) The screening levels ensure protection of human health and the environment considering all significant routes of exposure. How will the establishment of these safe levels for all hazardous constituents affect other programs administered by EPA or other agencies?

Under certain circumstances, anticipated by EPA to occur extremely infrequently or not at all, the Agency may decide not to establish any treatment standard under section 3004(m). This situation would arise in cases where EPA has determined that all applicable treatment standard for a hazardous waste (either due to their failure to achieve "substantial" reductions in the waste's toxicity or mobility, or due to EPA's determination that they pose greater risks than those posed by land disposal) and where the Agency is unable to develop screening levels. Since the screening levels identify levels at which land disposal may be determined to be protective of human health and the environment, the Agency would not be able to establish them if, for example, critical data elements upon which calculation of these levels depends are absent or are of insufficient quality. In such a case, EPA will promulgate regulations that certify the statutory prohibition. Generators or facility owners or operators desiring to continue managing the waste in land disposal units will be required, in such cases, to submit petitions to EPA demonstrating such management to be "protective" of human health and the environment at specific facilities, as discussed in greater detail in subsequent units of this preamble.

APPENDIX E

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260, 261, 262, 264, 265, 268, 270 and 271

[SWH-FRL-3725-8]

**Hazardous Waste Management
System: Land Disposal Restrictions**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Response to court demand.

SUMMARY: On November 7, 1986, EPA promulgated the first set of land disposal restriction regulations, including treatment standards based on the Best Demonstrated Available Technology (BDAT). In doing so, the Agency rejected a proposed approach in which treatment standards would be capped by risk-based screening levels. A number of groups filed petitions for review which challenged EPA's choice of technology-based standards over risk-based screening levels. On September 15, 1989, a panel from the Court of Appeals for the District of Columbia Circuit found that EPA's selection of technology-based treatment standards was reasonable based upon interpretation of section 3004(m) of the Resource Conservation and Recovery Act (RCRA). However, the panel also concluded that EPA failed to adequately explain its policy preference for technology-based standards over risk-based screening levels and the Court remanded the rule to the Agency to either clarify the selection or withdraw the final rule. This notice is the response to the Court's order.

EFFECTIVE DATE: This response is effective on February 26, 1990.

I. Background

On November 7, 1986, EPA promulgated the first set of land disposal restrictions and treatment standards, and further set out the framework of regulations that explained and implemented the Land Disposal Restrictions Program. See 51 FR 40572. Perhaps the most important feature of these regulations was the Agency's determination to base section 3004(m) treatment standards for prohibited hazardous wastes on performance of the Best Demonstrated Available Technology (BDAT), i.e., to adopt treatment standards that are technology-based. At proposal, the Agency had solicited comment on an alternative whereby technology-based treatment standards would be capped by risk-based screening levels, which incorporated initial toxicity levels for hazardous constituents plus predictive modeling based on assumptions of migration to a point of exposure. See 51 FR 1610-12. In rejecting this screening level approach in the final rule, the Agency alluded to the many adverse comments it had received which stressed the uncertainties associated with EPA's proposed screening level approach which would have capped hazardous waste treatment levels with risk-based levels reflecting predictive modeling of waste behavior in land disposal environments. The Agency also referred to legislative history that indicated that the section 3004(m) treatment standards were to be technology-based. EPA then adopted a final rule and methodology whereby treatment standards are to be based on performance of BDAT and are not to be capped in the land disposal restriction regulations by the proposed screening levels. See 51 FR 40578. The Agency stated that "the technology-based approach adopted in the final rule, although not the only approach allowable under the law, better mirrors the intent of Congress." See Admin-

istrative Record p. 36, 316 (Response to Comment Back-ground Document).

A number of industry petitioners filed petitions for review which challenged the choice of technology-based treatment standards as being contrary to section 3004(m)'s command to establish treatment standards "which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." In a recent opinion, a panel from the Court of Appeals for the District of Columbia Circuit held that the literal language of section 3004(m) does not mandate a risk-based approach, and that the Agency's interpretation that the treatment standards were to be technology-based was reasonable. See *Hazardous Waste Treatment Council v. EPA*, 886, F.2d 355 (D.C. Cir. Sept. 15, 1989) ("HWTC III"), *id.* at 361-64. The Court concluded further, however, that EPA had failed to adequately explain its policy preference for technology-based treatment standards, over the proposed approach based on screening levels. *Id.* at 364-66. Judge Silberman, concurring, also found that section 3004(m) does not mandate risk-based treatment standards (*id.* at 371-72), but would not have addressed the further issue of whether EPA's choice of a technology-based regime was reasonable given the inadequacy of the Agency's explanation of its choice. *Id.* at 373-74.

The Court consequently remanded the rule to the Agency in order that the Agency either "clarify its rea-sons for adopting the Final Rule in preference to the Proposed Rule", or to withdraw the Final Rule. *Id.* at 371. The present Federal Register Notice constitutes EPA's response to the Court's opinion.

II. EPA's Ultimate Preferred Resolution

Before addressing the issue of justification of EPA's choice of technology-based BDAT in the final solvents and dioxin rule, EPA wishes to address the ultimate resolu-

tion it envisions for the section 3004(m) treatment standards. EPA accepts, and agrees with, the Court's admonition that EPA may not establish treatment standards "wholly without regard to whether there might be a threat to man or nature." See 886 F.2d at 362; also concurring opinion, *id.* at 372. EPA believes that the best way ultimately to achieve this objective is not to require further treatment of prohibited hazardous wastes containing threshold levels of hazardous constituents at which listed wastes themselves would no longer be deemed hazardous, within the broad meaning of RCRA section 3001.¹

EPA is presently unable to promulgate such levels, however. This is an issue that has bedeviled the Agency

¹ EPA also agrees with the Court [886 F.2d at 362-64 and 375 (concurring opinion)], that standards developed under statutory provisions that differ from section 3004(m) in that they direct EPA to determine acceptable levels of risk do not automatically circumscribe the permissible level for the section 3004(m) treatment standards. Nor are standards that are applied in particularized circumstances, such as RCRA clean closures, no migration determinations, and delistings, necessarily the same levels that EPA would conclude on a generally-applicable basis minimize threats to human health and the environment.

EPA notes further, that in construing the language of section 3004(m), which requires that treatment assure that "short-term and long-term threats to human health and the environment are minimized", the Agency does not believe that this standard requires the elimination of every conceivable threat posed by disposal of a prohibited hazardous waste. Rather, Congress intended that the treatment standards have some flexibility. See Sen. Chafee's floor statement introducing the amendment that became section 3004(m): "It is not intended that every waste receive repetitive or ultimate levels of treatment, nor must all inorganic constituents be reclaimed." See 130 Cong. Rec. S. 9178 (daily ed. July 25, 1984). (EPA notes in addition, however, the Congressional preference for destruction of organic constituents, see Cong. Rec. S. 9179 (daily ed. July 25, 1964) (statement of Sen. Chafee), and believes that treatment standards based on thermal destruction of organics properly reflect this preference.)

for years and one that remains an Agency priority. Many of the very uncertainties discussed below that determine the Agency's policy preference for technology based standards instead of the screening level approach proposed initially likewise have not been resolved fully enough to promulgate threshold concentration levels.

EPA's eventual intention to use threshold hazardous waste levels concurrently under development to cap the section 3004(m) treatment standards still leaves the question of which standards to apply in the interim. (If no treatment standards are in effect, then the various statutory prohibitions in sections 3004(d), (e), and (on May 8, 1990) (g) ("hammers") would take effect, and most hazardous waste disposal would thus be prohibited unless it occurs in a land disposal unit determined by EPA to satisfy the statutory "no migration" test. Since this would leave most hazardous waste without a legal management option, EPA believes it imperative to have treatment standards in place.) The specific issue requiring resolution is for EPA to explain why in the solvent and dioxin rule it preferred technology-based standards to the proposed screening level approach, or to withdraw the promulgated regulation. See 886 F.2d at 371. EPA has determined that the soundest choice for the interim is to retain its original choice of technology-based treatment standards based on performance of BDAT. The Agency's reasons are based on both legal analysis and the Agency's determination that its choice of options is consistent with and furthers the Congressional intent and policy objectives in promulgating the land disposal restrictions provisions. These points are discussed below.

III. Choice of BDAT Versus the Proposed Screening Level Approach

A. Legal Analysis

It is now established that section 3004(m) does not dictate that treatment standards be either technology-based or risk-based. See 886 F.2d at 361-64. Clearly, the requirement in section 3004(m) that treatment standards minimize threats to human health and the environment is ambiguous as to the precise extent of treatment.

Even more important in the Agency's view, is the indication that Congress expected the Agency to adopt a different approach in establishing treatment standards than the approach used heretofore by the Agency in establishing subtitle C regulatory standards. Those standards implement the statutory directive to establish hazardous waste management standards at a level "as may be necessary to protect human health and the environment." See, e.g., section 3004(a). EPA has implemented this statutory standard by developing regulations that are based on ascertaining a level of risk that EPA deems acceptable and crafting controls that seek to ensure that this level of risk is not exceeded.

Section 3004(m), in contrast, does not require that treatment standards be protective of human health and the environment, but rather commands that those standards ultimately substantially diminish waste toxicity or mobility in order that "short-term and long-term threats to human health and the environment be minimized." EPA believes that this language can reasonably be interpreted to require more than the normal subtitle C regulatory command that standards be those necessary to protect human health and the environment. This conclusion is reinforced by the many statutory provisions that were part of the 1984 amendments stressing the inherent uncertainties associated with assessing the safety and land disposal of hazardous wastes. RCRA sections 1002

(b) (7), 3004(d)(1)(A), 3004(e)(1)(A), 3004(g)(5), and the Congressional determination that the only protective land disposal units are those for which EPA has determined, with a "reasonable degree of certainty," that "there will be no migration of hazardous constituents from the disposal unit for as long as the wastes remain hazardous."

The legislative history of section 3004(m) also provides support for the interpretation that Congress intended something other than treatment standards reflecting EPA-determined acceptable levels of risk normally used in establishing subtitle C regulations. Section 3004 (m) was adopted as an amendment to the Senate bill (S. 757). It replaced a provision in the House bill (H.R. 2867) that specifically authorized EPA to make risk-based determinations in deciding whether particular hazardous wastes should be prohibited from land disposal. It also replaced the Senate Committee bill which would have required the Agency to establish methods of treatment "which are necessary before such method or methods of disposal of * * * hazardous waste would be protective of human health and the environment." See S. 757, section 3004(b)(7), printed at S. Rep. No. 284, 98th Cong. 2d Sess. 86. The legislative history to the amendment ultimately adopted states instead that "the requisite levels of [sic] methods of treatment established by the Agency should be the best that has [sic] been demonstrated to be achievable * * * The intent here is to require utilization of available technology in lieu of continued land disposal without prior treatment." See 130 Cong. Rec. S. 9178 (daily ed. July 25, 1984) (statement of Sen. Chafee).

It is true that some of the legislative history is not always specific regarding the extent of pretreatment to be required as a precondition to land disposal. Nowhere in the legislative history, however, is EPA directed to rely on the normal subtitle C levels of acceptable risk.

At a minimum, the materials described here show that Congress did not provide clear guidance on the meaning of 'minimize threats'. Hence, EPA believes that it has discretion to adopt an interpretation that emphasizes the need for certainty in reducing the risks of and disposal of hazardous wastes and that allows EPA to prefer technology-based standards over capping levels that incorporate unacceptable levels of uncertainty.

B. EPA's Policy Preference

EPA's interpretation of section 3004(m) also serves Congress' goals. EPA views Congress' objectives in adopting the Land Disposal Restrictions Program as seeking to assure safety by removing as many of the uncertainties associated with land disposal of hazardous waste as possible, and to a lesser degree as forcing use of existing treatment capacity. See RCRA sections 1002 (b)(7), 3004(d)(1), (e)(1), (g)(1), and S. Rep. No. 284, 98th Cong. 1st Sess. at 19. Congress also intended that "reliance on land disposal should be minimized or eliminated, and land disposal, particularly landfill and surface impoundment, should be the least favored method for managing hazardous wastes." See section 1002 (b)(7).

These objectives are well served by retaining the technology-based treatment standards that the Agency has implemented until EPA can establish acceptability certain threshold levels that identify constituent concentration levels at which wastes are not hazardous. The "long-term uncertainties associated with land disposal" (section 3004(d)(1)(A)) are reduced by using treatment technologies whose performance is objective rather than predictive. Technology-based standards also better further the Congressional goal of using existing treatment capacity. This is because the risk-based screening level approach proposed initially would have served to cap treatment, and thus at least to some extent, de-

creased use of treatment capacity. See 51 FR 1612-13. For the same reason, use of the screening level approach would not have minimized hazardous waste land disposal to the same extent as technology-based standards because more wastes could permissibly be land disposed without treatment (or with less treatment).

The legislative history also shows that another of Congress' objectives was the promulgation of treatment standards that were at least roughly equivalent (in terms of stringency of control) to standards required under the Clean Water Act and the Clean Air Act. The Senate Report provides:

A requirement for treatment of hazardous constituents under other statutes is another factor that may be considered. For example, the Administrator should impose, as a condition of land disposal, a treatment requirement that is consistent with categorical pretreatment standards required pursuant to the Clean Water Act. Increased regulation under the Solid Waste Disposal Act should complement and reciprocally re-enforce regulations under the Clean Water and Clean Air Acts. It makes little sense to improve or accelerate regulations under those statutes only to have environmental goals frustrated by loopholes allowing less stringent treatment under the Solid Waste Disposal Act.

S. Rep. No. 284 at 16.

The categorical pretreatment standards under the Clean Water Act cited above are technology-based regulations.² The Clean Air Act also establishes regulatory programs—the New Source Performance Standards and Prevention of Significant Deterioration—that are tech-

² Senator Chafee later clarified, however, that section 3004(m) does not mandate a technology-forcing approach such as the Best Available Technology approach of the Clean Water Act. 130 Cong. Rec. S. 9178 (daily ed. July 25, 1984).

nology based. EPA is concerned that the screening levels proposed in 1986, with their reliance on predictive modeling to simulate dispersion and attenuation in the environment, might result in levels of control that are significantly less stringent than the levels imposed under either of these other programs. Such a result would clearly fail to serve this particular objective.

There are also other problems with the proposed approach which cause EPA to prefer the technology-based rule adopted. The proposed rule attempted to take into account the waste's behavior in the land disposal environment after it is land disposed. Since promulgation of the final rule in November 1986, EPA has in fact abandoned the predictive model that was used as the basis for screening levels due to inadequacies relating to wastes' migratory potential in landfill environments, and aquifer dispersion characteristics. Because the screening levels proposed in 1986 incorporated a modeling approach to dilution and attenuation in the environment based on a model which EPA now believes is superseded, EPA views promulgation of those levels as insufficiently certain at this time to satisfy Congress' immediate goals for land disposal treatment standards.

Even without predictive modeling, uncertainties currently remain relating to assessing wastes' toxicity. See generally 51 FR at 1714-20 (January 14, 1986). These problems, while not insurmountable over a long term have posed difficulties in developing threshold levels in the short-term that could be used to assess when threats of hazardous waste land disposal are minimized with enough assurance to cap treatment standards. The difficulties that remain involve dealing with the large number of hazardous constituents controlled under the RCRA subtitle C program (which exceed by several times even the extensive list of priority pollutants under the Clean Water Act), assessing and possibly devising exposure scenarios for the air and environmental (rather

than human) exposure pathways, developing analytical detection methods for over 100 hazardous constituents, and determining an approach when threshold levels are less than the pollutant's limit of detection.

EPA must grapple with each of these issues, determining which are substantial enough to play a significant role in the selection of any capping levels, and how to work with the factors that it finds to be significant. Although EPA has begun work on a rule that will consider these issues, that rule is not yet ready for proposal, much less promulgation.

EPA prefers to further the statutory objective of assuring safety by eliminating as much of the inherent uncertainty of hazardous waste land disposal by retaining the current approach of technology-based treatment standards until it develops concentration thresholds for determining when wastes are hazardous. It therefore is the Agency's decision to retain treatment standards that are based on performance of BDAT until it develops acceptably certain threshold concentration levels. This approach not only better mirrors Congressional interest but better fulfills the Congressional objectives in promulgating the land disposal restrictions provisions.³

³ EPA notes further that even if it were to choose to switch immediately to a risk-based approach to establishing treatment standards, the existing treatment standards for solvent and dioxin wastes were not established "wholly without regard to whether there might be a threat to human health and the environment" (886 F.2d at 362), and thus would be permissible. To the best of the Agency's present knowledge, the standards are not established below levels at which there are threats to human health and the environment. The standards for both solvent and dioxin nonwastewaters reflect the level of potentially leachable constituent in the waste (as measured by the Toxicity Characteristic Leaching Procedure (TCLP) protocol). Thus, the standards could allow disposal of wastes containing high concentrations of solvents and dioxins, and further, non-

IV. Opportunity for Notice and Comment

Although EPA is issuing this notice without having afforded all interested persons an opportunity for comment, the Agency does not believe that such an opportunity is required or warranted. In the first place, EPA directly solicited comment from all of the parties to

redundant minimization of threats could be achieved by actually destroying the hazardous constituents and removing them from the environment. In addition, with respect to solvents, EPA continues to find that these standards are warranted because solvents (by definition) mobilize other hazardous constituents. In fact, EPA's most widely applicable tool for assessing the hazardousness of toxic wastes, the EP toxicity characteristic (as well as the proposed TCLP), assumes disposal in an environment where a waste is not exposed to solvents (or to chemicals with solvent properties). If solvents in the land disposal environment are not minimized, a fundamental premise of the characteristic is undermined, and land disposed wastes will be exposed to higher concentrations of mobilizing chemicals. See 51 FR 21532 (June 13, 1986). A further factor warranting minimization of land disposed solvents is that they can damage land disposal unit liner systems. See 51 FR 1621. Although the concentration levels, and conditions under which the F001-F005 solvents (either singly or as a group) could mobilize other co-disposed waste constituents or damage land disposal unit liner systems is not reliably established, EPA believes it would be warranted in retaining the present controls to guard against these concerns. Thus, EPA finds that the technology-based treatment standards for solvents do not force treatment below levels at which there is no threat to human health and the environment.

EPA notes further that its existing rules (40 CFR 280.20) allow persons to petition the Agency to amend or promulgate new regulations. These procedures are open to persons believing they can demonstrate that the standards for solvents are established "wholly without regard to whether there might be a threat to human health and the environment."

With respect to the dioxins, the treatment levels are orders of magnitude above levels that warrant listing the wastes as hazardous. See 51 FR 30271 (July 25, 1985); 53 FR 7903 (March 11, 1989); 53 FR 20103 (June 2, 1988); 54 FR 27167 (June 28, 1989), and are thus obviously greater than levels at which the Agency could reasonably determine that threats to human health and the environment are minimized.

the litigation, received their written (and, in some cases, oral) comments and considered these comments in preparing this response. Second, the Agency does not believe that this notice is a "rule" subject to the Administrative Procedure Act's (APA) notice and comment requirements. The notice creates no new requirements, but reaffirms existing standards and supplies a more fully explicated basis for those standards. Moreover, even if this notice should be considered an APA rule, EPA considers further opportunity to comment to be unnecessary, within the meaning of 5 U.S.C. 553(b)(3)(B), because there was ample opportunity to comment on all of these issues in the underlying 1986 rulemaking. In addition, EPA would be unable to meet the deadline afforded by the Court were it to formally solicit comment and respond to the comment before issuing this notice. Failure to meet the deadline could result in suspension of existing treatment standards and activating the statutory hammer provisions for at least dioxin and solvent wastes, leaving no legal means of land disposing these wastes (except in no-migration land disposal units, presently a virtually null set). RCRA section 3004(e)(1). Consequently, the Agency finds that even if this Notice should constitute a rule, there is a good cause for issuing it without opportunity for prior comment.

Dated: February 12, 1990.

William K. Reilly,

Administrator.

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